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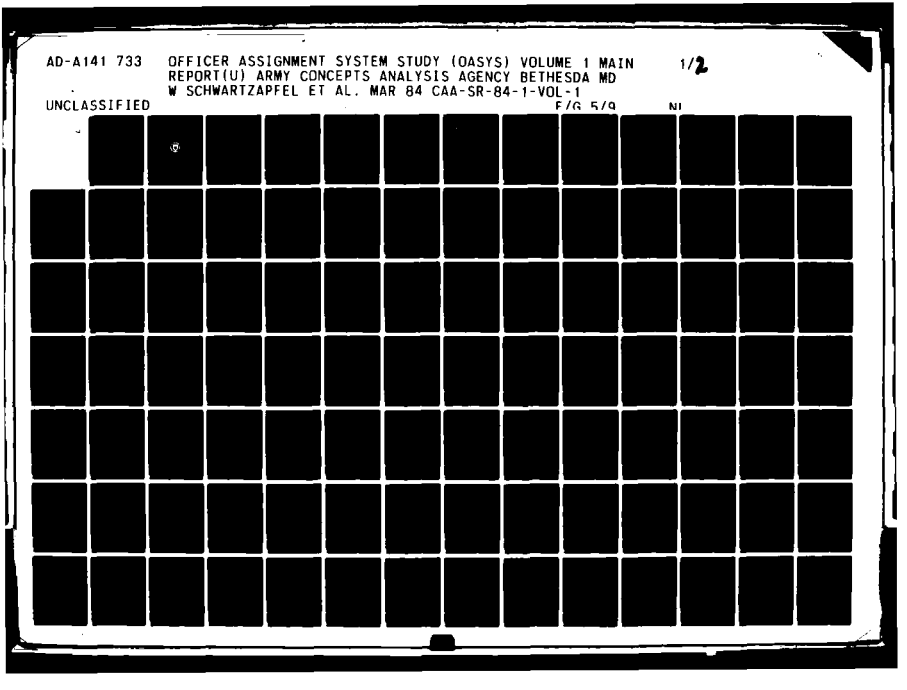

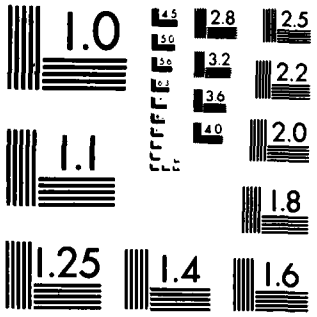

STUDY REPORT
CAA-SR-84-1

AD

OFFICER ASSIGNMENT SYSTEM STUDY
(OASYS)
VOLUME I - MAIN REPORT

MARCH 1984

PREPARED BY
FORCE SYSTEMS DIRECTORATE

US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814

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The findings of this report are not to be construed as an official Department of the Army position, policy, or decision unless so designated by other official documentation. Comments or suggestions should be addressed to:

Director
US Army Concepts Analysis Agency
ATTN: CSCA-FS
8120 Woodmont Avenue
Bethesda, MD 20814

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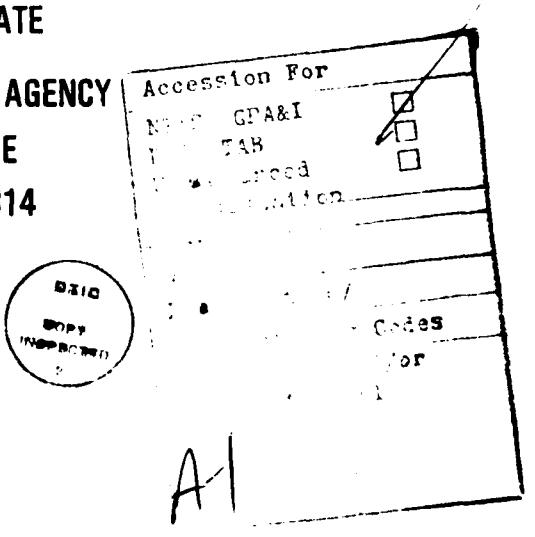

DEPARTMENT OF THE ARMY
US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814

REPLY TO ATTENTION OF:

CSCA-FS

17 May 1984

SUBJECT: Officer Assignment System Study (OASYS)

Deputy Chief of Staff for Personnel
Department of the Army
ATTN: DAPE-MPD
Washington, DC 20310

1. Reference:

a. Letter, DAPE-MPD, HQDA, 1 September 1983, subject as above.

b. Letter, CSCA-FS, US Army Concepts Analysis Agency, 27 March 1984, subject as above.

2. Letter, reference 1a, directed the US Army Concepts Analysis Agency (CAA) to conduct a study to validate the procedure to determine the number of women lieutenants to be accessed each year, by initial specialty code (INSPEC) and to establish a methodology to define requirements for additional specialties (ADSPEC) for women officers. In response to this request, our draft study report was provided for your comments, along with a tape of the OASYS system for MILPERCEN, the system user, reference 1b.

3. The OASYS Study Final Report is attached and has incorporated your informal comments as received. We look forward to receiving an evaluation of this study in accordance with AR 5-5, and further request you advise this office of your experience using the OASYS Model and any benefits derived therefrom to the Army.

4. This Agency expresses appreciation to all activities that have contributed to this project. Questions and/or inquiries should be directed to the Assistant Director, Force Systems Directorate (ATTN: CSCA-FS), US Army Concepts Analysis Agency, 8120 Woodmont Avenue, Bethesda, Maryland 20814, AUTOVON 295-1607.

David C. Hardison

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as

DAVID C. HARDISON
Director

CAA	OFFICER ASSIGNMENT SYSTEM STUDY (OASYS)	ONE SHEET STUDY GIST CAA-SR-84-1

THE PRINCIPAL FINDINGS of the work reported herein are as follows:

(1) It is feasible to combine the Women Officer Strength Model (WOSM) and Age by Grade and Pair (AGEBGPR) Model to determine how many female lieutenants should be accessed annually by allocating current authorizations among various initial specialties to meet a specific size force.

(2) Women officers in the force can be assigned an additional specialty to reflect the position authorizations allocated to them.

(3) Preferential distribution of interchangeable spaces within WOSM is required by specialty code within any constrained size women officer force.

(4) AGEBGPR ages the force and determines accessions based on continuation rates, distribution of authorizations by specialty, and steady-state force size.

THE MAIN ASSUMPTIONS on which the work reported herein rests are as follows:

(1) The force structure, the personnel authorizations, and the associated direct combat probability coding of the Officer Force Management Models (OFMM) and submodels provide the basis for the steady-state personnel target mix of this study.

(2) Personnel distribution, force structure, and historical data provided by MILPERCEN are valid.

THE PRINCIPAL LIMITATIONS of this work which may affect the findings are as follows:

(1) Continuation rates for female officers by specialty code are projected from existing combined male-female continuation rates.

(2) Casualty rates are projected to be the same for each officer grade within specialty codes.

THE SCOPE OF THE STUDY included only Active Army female commissioned officers in OPMS-managed specialties.

THE STUDY OBJECTIVES were to:

(1) Review the current methodology used to determine the accession requirements as well as initial and additional specialty (INSPEC/ADSPEC) assignments for women officers.

(2) Define those constraints such as "set-asides," "management factors," and "grade-space ratio" that limit the number of women officer accessions.

(3) Modify the methodology to allow flexibility in these constraints, within a rationale that is reasonable and supportable.

(4) Evaluate the impact of the modifications on women officer accessions, INSPEC/ADSPEC assignments, and career progression.

(5) Transport the methodology developed and/or model modifications to MILPERCEN.

THE BASIC APPROACH followed in this study was to modify existing models to define the maximum number of women officer authorizations by specialty code. These data were used to determine female officer accessions, their branching (ADSPEC) requirements, and distribution of the women officer force by grade, specialty code, and years of service.

THE REASON FOR PERFORMING THE STUDY was to provide the Army a credible method to compute the number of officer authorizations that could be filled by women and show how they could be branched into additional specialties.

THE STUDY SPONSOR was the Office of the Deputy Chief of Staff for Personnel which established the objectives and monitored study activities.

THE STUDY EFFORT was directed by Mr. Wilbert Schwartzapfel, Deputy Assistant Director, Force Systems Directorate.

COMMENTS AND QUESTIONS may be sent to CAA, ATTN: Assistant Director, Force Systems Directorate (CSCA-FS).

Tear-out copies of this synopsis are at back cover

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CHAPTER 1

INTRODUCTION

1-1. PROBLEM. Presently, the number of women officers to be accessed each year according to initial specialty code is developed from the Women Officer Strength Model (WOSM); but it has built-in, fixed constraints. These constraints have seemed to overly restrict the number of women officers to be accessed annually and/or yield high concentrations of female officers in a few specialty codes. Therefore, through the years, personnel managers have not had a reliable method to develop female officer accession objectives; instead, they have relied on estimates based on market projections and their best judgment. The decision process becomes more difficult as the number of influencing criteria increases, e.g., greater focus on equitable professional development opportunities for women in the Army and revised assignment policies for women officers according to the Direct Combat Probability Coding (DCPC) policy. The Officer Assignment System (OASYS) Study was initiated to develop a methodology to assist in establishing female officer accession requirements and prepare distribution plans by initial and additional specialties (INSPEC and ADSPEC).

1-2. STUDY PURPOSE. The purpose of the OASYS Study is to provide a methodology to determine the number of women lieutenant accessions by INSPEC and to define ADSPEC requirements for women officers.

1-3. SCOPE. The study considers current Army policy matters for accessing women officers and assigning them ADSPECs. The 1983 Personnel Structure and Composition System (PERSACS) with updated DCPC coding and the June 1983 officer inventory are study inputs. In the study scope, as revised, neither the INSPEC nor ADSPEC requirements for women warrant officers and commissioned officers of the Special Branches--The Surgeon General (TSG), the Judge Advocate General (JAG), and the Chaplains--were considered.

1-4. OBJECTIVES. The specific objectives of this study are:

a. Review the current methodology used to determine the accession requirements and INSPEC/ADSPEC assignments for women officers.

b. Define those constraints that limit the number of accessions to include "set asides", "management factors", and "grade-space ratio".

c. Modify the methodology to allow flexibility in these constraints within a rationale that is reasonable and supportable.

d. Evaluate the impact of the modifications on women officer accessions, INSPEC/ADSPEC assignments, and career progression.

e. Transport the methodology developed and/or model modifications to MILPERCEN.

1-5. CONSTRAINTS. The study constraints are:

a. Women officers cannot serve in positions coded with a DCPC of P1.

b. Personnel authorizations/requirements are delineated by three-digit specialty skill identifiers (SSI) in WOSM.

c. Women officers of the Special Branches (TSG, JAG, Chaplain) are not considered.

1-6. ASSUMPTIONS. The study assumptions are:

a. The force structure described in the 1983 PERSACS, the personnel authorizations, and the associated combat coding of the Officer Force Management Models (OFMM) and submodels provided the basis for the steady-state personnel target mix of this study.

b. The current force was increased by constant annual accessions.

c. Historical data of personnel distribution and continuation rates by year group, grade, SSI, and gender provided by MILPERCEN are valid.

1-7. ESSENTIAL ELEMENTS OF ANALYSIS (EEA). Specific questions to be answered by this analysis are:

a. What is the adequacy of the current procedures to determine the INSPEC/ADSPEC assignments for women officers?

b. What are the constraints (e.g., "set asides", "management factors", and "grade-space ratios") that appear ultra-conservative and could restrict the career progression of women officers?

c. What are suitable alternative constraints?

d. How would the projected women officer accessions as computed using selected alternative constraints compare with those using the present model?

e. Using alternative constraints, what will be the distribution of women officers, by grade and by SSI, for each fiscal year through FY 89?

1-8. CONTENTS OF THE REPORT. The report consists of two volumes. Volume I, comprised of the following chapters and supported by appendices, presents the results of the study. Chapter 2 outlines the procedures to access female commissioned officers and how INSPECs and ADSPECs are assigned. Chapter 3 discusses the study methodology and the rationale for its choice. Chapter 4 details the model revisions; reference is made to Appendix D, which provides a detailed description of the changes. Chapter 5 completes Volume I with analysis of various computer runs and presentation of findings, and observations about the study. Volume II is designed for the user. It includes technical reference material for an ASCII FORTRAN programer using a Sperry computer system.

CHAPTER 2

ACCESSIONS AND AWARD OF ADSPEC

2-1. INTRODUCTION. In order to develop the professional skills required in the Army, each officer is assigned two specialties under the Officer Personnel Management System (OPMS). An initial specialty (INSPEC) is assigned upon entry to active duty, and it normally remains the primary skill/specialty throughout an officer's career. Usually during the officer's eighth year of service, an alternate or additional specialty (ADSPEC) is assigned. The purpose of this chapter is to provide an overview of the present method used by the Department of the Army to assign initial and additional specialties to commissioned officers. Comments are included to highlight considerations pertinent to women officers.

2-2. RESTRICTIONS TO WOMEN OFFICER STRENGTHS. Constraints to women officer strengths vary among the Services. Public law specifies the Air Force and Navy combat duty restrictions, and Secretary of the Army policy directives guide the Army. The Army has incorporated this guidance into authorization documents by annotating personnel authorizations (line items) with the appropriate direct combat probability code (DCPC); code P1 indicating high probability of routinely engaging in direct combat through code P7 indicating decreased likelihood of participation in direct combat. Related to the combat restriction are three other factors influencing women officer strengths:

- Combat casualty replacement.
- Geographical rotation equity.
- Professional career progression.

Corresponding to the number of authorizations coded for direct combat (P1), the Army will suffer a number of combat-related casualties during hostilities. Authorizations must be earmarked (set aside) so that combat-eligible replacements (male officers) can be reassigned during the early stages of conflict. After sufficient time has passed, e.g., D+30, D+60, or D+90, the replacement pipeline can meet the demand for combat replacements. Therefore, replacement of casualties is an interim, but essential, demand placed on the current active force which ultimately constrains female officer strength. Similarly, geographical rotation equity must be maintained between male and female officers; i.e., personnel managers attempt to establish minimum CONUS tour lengths for officers returning from OCONUS tours. If, for example, most of the combat (male-only) positions are overseas, it is conceivable the women officers would serve primarily in CONUS and the men OCONUS. This would be unfair to both; therefore, a certain number of authorizations would have to be set aside for male officers. This number of set-aside CONUS authorizations would be calculated to achieve a rotational balance between men and women officers. This, too, constrains

the women officer strength. Thirdly, equitable opportunity for career progression must be provided both men and women officers. The proportion of both male-only and interchangeable authorizations at one grade should equal the proportion at the next lower grade. If not, promotion-eligible officers filling male-only authorizations would not have the same advancement opportunity as those officers filling other authorizations. Therefore, the pool of authorizations available to women would have to be decreased thereby reducing potential women officer strength.

2-3. ACCESSIONS. Nonspecial branch officers are accessed from the following sources: USMA, ROTC, OCS, Reserves, and direct appointments. Annually, HQDA personnel managers determine the number of officers to be accessed into each initial specialty code (INSPEC). The number of lieutenant accessions is designed to meet the Army's future requirements and simultaneously satisfy strength limitations established by Congress. In the past, women officer accession objectives have been affected by factors such as policy constraints precluding their assignment to combat positions as well as a concern for potential impact upon operational readiness. Now, the Army is guided by policy attempting to improve the utilization of women officers subject to "market" limitations; i.e., the resource pool from which women officers can be commissioned. The personnel managers need a model to consolidate the many aspects of policy guidance and requirements data in order to prepare an annual women officer accession plan. OASYS meets this need; it develops an accession plan which can be aged to determine the steady-state number of women officers.

2-4. AWARD OF ADSPEC. During an officer's eighth year of service, those not previously branched are assigned an alternate or additional specialty (ADSPEC). This includes approximately 85 percent of the officers not branched previously during their first seven years of service. This differs from the accession process which is an annual requirement; instead, branching is a continuing effort conducted by career program managers. Up to the present, there was no model which assisted the personnel managers to consider the many factors affecting the branching of women officers. These factors include the number of field grade authorizations, combat restriction from direct combat, proportion of an officer's career spent in a particular specialty, and proponent preference. OASYS meets the need to assist career program managers to branch women officers into appropriate ADSPEC.

CHAPTER 3

STUDY METHODOLOGY

3-1. INTRODUCTION. Initially the Study Team focused on reviewing current methods used to determine an annual number of women officer accession and annual branching assignments. Existing models were evaluated and were found to be applicable although modifications were required. A major consideration that favored adapting existing models to OASYS is the advantage gained by transporting models already familiar to the user upon conclusion of the study; this would facilitate system implementation. Several models were studied, but the two selected for revision and incorporation into OASYS were the Women Officer Strength Model (WOSM) and Age by Grade and Pair (AGEBGPR). Essentially, WOSM was used to determine from PERSACS authorizations the maximum number of authorized spaces that could be filled by women officers. Given this number of authorizations required in the force, AGEBGPR determined the number of officers to be accessed; also it provided a branching plan for the year group in their eighth year of service.

3-2. WOSM. In its earlier version, WOSM determined the number of interchangeable spaces by examining four set-asides. Essentially the four set-asides took spaces from the interchangeable pool, and these spaces were added to the number of male-only spaces. NOTE: The Direct Combat Probability Coding policy determines positions to be coded "male-only" in The Army Authorization Document System (TAADS). The resultant number of authorizations (male-only plus set-asides) are reserved for male officers, and the remaining interchangeable spaces (interchangeables) can be filled by male or female officers. Figure 3-1 depicts the relationship among male-only spaces, set-asides, and interchangeables. This resultant number of interchangeable spaces (computed after subtracting the set-asides) was intended to assist personnel managers determine annual accessions. But the set-aside calculations lacked credibility, and it was infeasible to compute manually the annual accessions from the resultant interchangeable data. In the following paragraphs are the set-asides included in the earlier version of WOSM; they are similar to the set-asides used in the Women Enlisted Expansion Model (WEEM) developed in 1972.

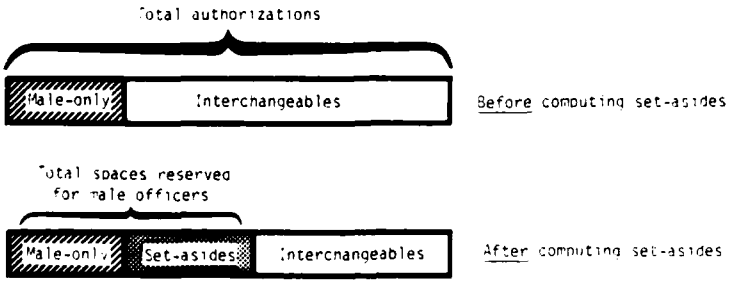


Figure 3-1. Relationship Among WOSM Authorizations

a. Promotion Set-Aside. This set-aside was computed using a term called combat ratio--the ratio of male-only (P1) spaces to total spaces for each specialty. This set-aside was designed to normalize the grade structure to provide equal promotion opportunity between officers in male-only spaces and those occupying interchangeable spaces. Essentially, the model computed the highest combat ratio for each grade, and all lower combat ratios for the remaining grades were raised to equal the highest ratio. This increased the number of male-only spaces available for promotion thereby reducing the number of interchangeable spaces available to women. This set-aside was designed to eliminate choke points in the grade structure and normalize the promotion pattern. This approach to equalize career progression opportunity is credible and is utilized in the revised WOSM, but it was redundant with the following two computations in the earlier versions of WOSM:

- Calculation of the grade-space ratio and reverse grade-space ratio.
- Computation of the Professional Development Set-Aside.

b. Professional Development and Mobilization Set-Asides. These two were combined into one set-aside in the earlier WOSM. Career program managers believe professional development involves many factors that require off-line, manual management. These factors include unit command opportunities as well as attendance at military and civilian educational institutions, and they relate significantly to advancement to the Army's senior grades. The earlier version of WOSM set aside male-only spaces based on the percentage of personnel in the THS (transient-holdees-students) account. But this was not a credible approach and the underlying formulae to calculate the Professional Development set-aside were incorrect. Actually this set-aside arbitrarily inflated the number of spaces removed from the interchangeable pool. The mobilization set-aside reserved spaces to ensure sufficient male-only officers were available to replace casualties. It has been ascertained that casualties from active, nondeploying units would be replaced during the early days of a conflict before the replacement pipeline is fully activated. In the earlier WOSM, one space was set aside for every male-only authorization in PERSACS. This indicated every male-only authorization would require one corresponding authorization be set aside as a casualty replacement regardless of specialty. However, Soldier Support Center data indicate there are significant differences in vulnerability among officers in various specialty codes; e.g., combat support arms personnel such as Communication-Electronics Officers (SC 25) are more vulnerable to casualties than officers serving in Operations Research (SC 49) positions. Also the mobilization set-aside was inflated because all male-only authorizations were included in the set-aside computations, not just the spaces likely to be in the combat theater; i.e., there was no possibility to consider less than a global war nor other deployment policies.

c. Rotation Set-Aside. Some specialties are imbalanced between CONUS and OCONUS male-only authorizations. The rotation set-aside was designed to ensure officers can serve in CONUS for a minimum number of months after each OCONUS tour. Therefore, as in the revised WOSM, CONUS spaces are subtracted (set aside) from the interchangeable pool if a specialty is configured with an excessive number of OCONUS male-only authorizations. Imbedded in the earlier version of WOSM was an algorithm which created hypothetical CONUS spaces to adjust for round-off error, and CONUS tour length minimums were fixed at 24 months. The approach utilized in OASYS is more straightforward and flexible.

d. Other Considerations. Prior to computing the theoretical female fill for each specialty code, the original WOSM selected the largest of the four set-aside values and decremented the appropriate pool of interchangeable authorizations. There was also an option for a management requirement set-aside, but this program coding had been deactivated. Essentially the management requirement set-aside established a ceiling for the number of women which could be assigned any specialty code. Lastly, the capability to constrain the total number of women officer authorizations in the force structure was transferred from the original to the latest version of WOSM. This constrained total corresponds to the steady-state size of the women officer force.

3-3. AGEBGPR. Age by Grade and Pair (AGEBGPR) is the second model adapted for OASYS. Using a given force authorization structure and THS account, the AGEBGPR model projects accessions based on company grade officer requirements, grade structure and continuation rates by specialty code. The accession routine within AGEBGPR was incorporated into OASYS without change. However, the ADSPEC routine required a minor modification so it could realistically designate the specialties into which women officers could be branched. This change arose from computer program code designating SC 54 (Operations, Plans, Training/Force Development) as a "sink" to adjust for round-off errors. Lastly, the aging routine produces the force projected for the next year. The steady-state size of the force is obtained by repeating runs of the model until steady state is attained.

3-4. RATIONALE FOR SELECTION OF METHODOLOGY. Both CAA and the primary user of OASYS, MILPERCEN, utilize UNIVAC 1100 computer systems. Consequently, delivering the required data files and original computer programs from MILPERCEN to CAA was greatly facilitated. An important goal regarding selection of the methodology was to develop OASYS in a manner to facilitate its subsequent transportation to and implementation by the system user. Developing credible results, i.e., authorizations for women officers that are logically distributed among the available specialties and that are not overly constrained, has been a high priority goal. And lastly, the need to respond to the following three recurring questions stated by personnel managers guided the methodological approach:

a. How many women officers should be accessed annually and in which specialties?

b. How should women in the year group currently in its eighth year of service be awarded ADSPECs?

c. What is the steady-state size of the women officer force based on projected accessions?

CHAPTER 4

MODEL MODIFICATIONS

4-1. INTRODUCTION. This chapter describes the modifications made to existing models highlighting any enhancements. Volume II documents the technical changes made to computer program code. Essentially, WOSM was totally rewritten while only minor modification was made to the AGEBGPR Model. Figure 4-1 depicts the general flow diagram of OASYS.

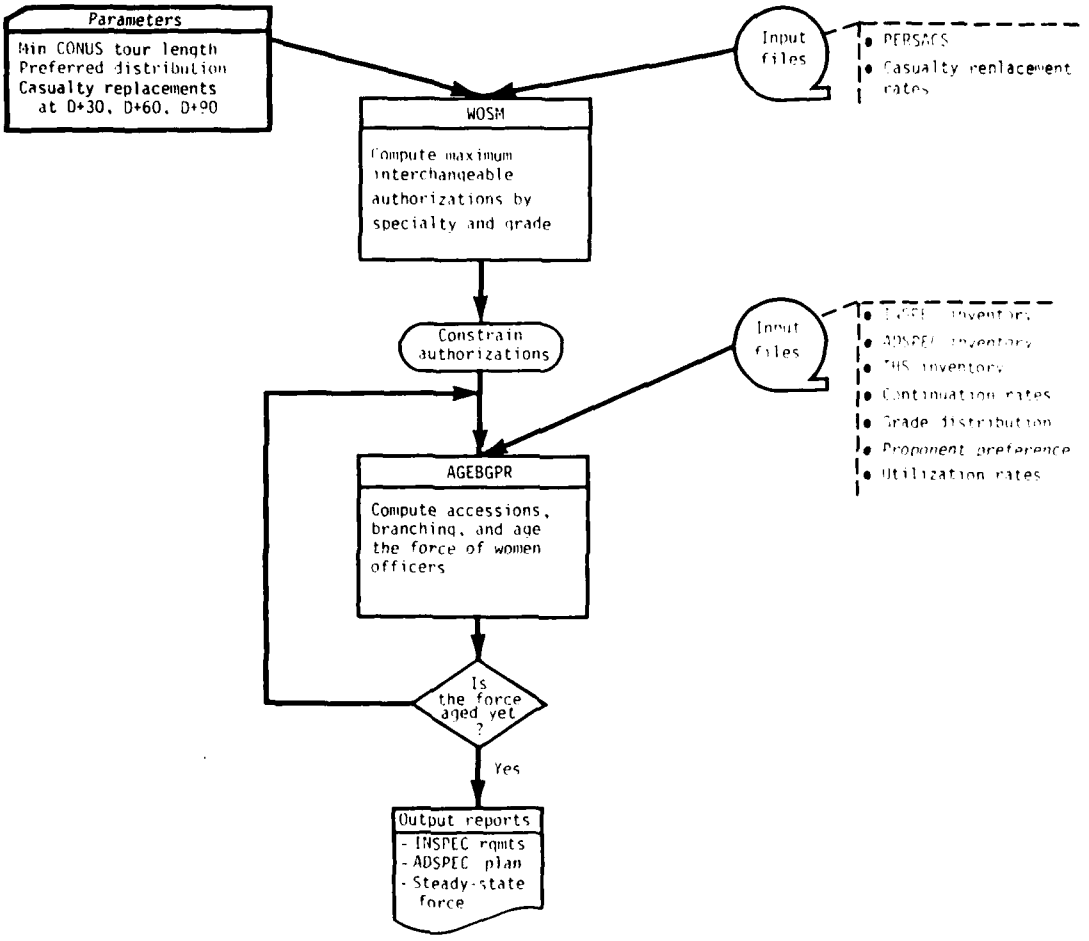


Figure 4-1. OASYS General Flow Diagram

4-2. MODEL REVISIONS. Based on the considerations outlined at the end of Chapter 3, the following approach was developed:

a. Revise the WOSM to enhance the credibility of the interchangeable force structure it defined.

b. Revise the AGEBGPR Model to call the interchangeable (or constrained women officer) force structure defined by WOSM vis-à-vis the total male-female officer force structure from PERSACS. From AGEBGPR would be obtained the accession and branching requirements as well as the steady-state number of women officers.

4-3. WOMEN OFFICER STRENGTH MODEL (WOSM). The principal function of WOSM is to compute the number of interchangeable authorizations (spaces) by grade and specialty code which can be filled by women officers. Intrinsic to this computation are the set-asides; these are additional spaces corresponding to those annotated by Department of the Army in TAADS indicating they can be filled only by male officers. Essentially, the number of interchangeable spaces are computed for each specialty code according to the following simple equation:

$$\text{Interchangeable} = \text{Total} - (\text{Male-only} + \text{Set-asides})$$

where:

Interchangeable	is the number of spaces for a given specialty code which can be filled by either male or female officers.
Total	is the pool of spaces in a given specialty code authorized in TAADS.
Male-only	is the number of spaces in a given specialty code which can be filled only by male officers.
Set-asides	is the number of spaces in a given specialty code calculated by using precise criteria which essentially "reserve" additional spaces for male officers; the set-aside authorizations are intended to provide equal opportunity while preserving combat capability.

a. Interchangeables. These are authorizations which can be filled by either male or female officers and are computed in WOSM from the set-asides. The three set-asides specifically defined within WOSM are Rotation Equity, Casualty Replacement, and Career Progression.

(1) Rotation Equity (ROTEQ). The ROTEQ set-aside is computed for each grade and specialty. It is intended to provide enough male-only spaces in CONUS so that officers can return to a male-only authorization and serve a minimum tour length in CONUS. Rotation equilibrium is achieved when the number of returnees to CONUS equals the number leaving CONUS for OCONUS. The diagram at Figure 4-2 depicts rotation equilibrium for male-only authorizations given the nominal tour lengths shown. NOTE: WOSM, as revised, includes the capability to establish minimum CONUS tour length at any value, e.g., 24 months, 48 months, etc.

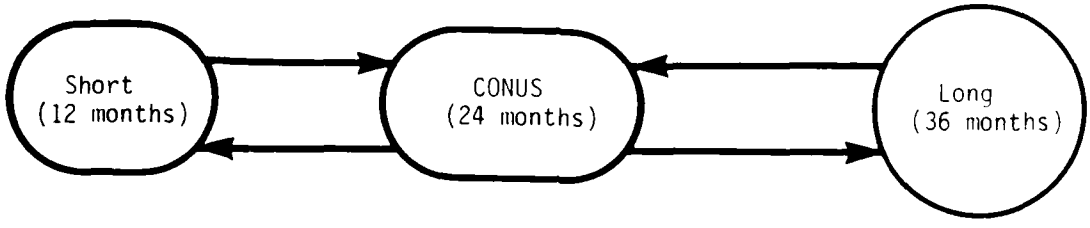


Figure 4-2. Rotation Equilibrium

The following general formula is used to calculate the ROTEQ set-aside; it equates the rate of CONUS departees with the rate of returnees from long-tour plus short-tour areas. See Appendix D for an example.

$$\frac{C}{T_C} = \frac{L}{T_l} + \frac{S}{T_S}$$

Definition of terms:

C, L, S is the number of spaces in CONUS and OCONUS (long- and short-tour areas)

T_C, T_l, T_S is the tour length in months in CONUS or OCONUS

(2) Casualty Replacement (CASREP). The CASREP male-only set-aside is intended to ensure sufficient replacements are authorized during the early days of conflict to replace officers likely to be killed, captured, or missing in action (KCMIA), wounded in action (WIA), or to suffer disease/non-battle injuries (DNBI). By definition, spaces coded P1 have the highest combat probability and can be filled only by male officers; therefore, some interchangeable authorizations must be set aside accordingly to ensure a sufficient flow of replacements during a conflict. As depicted at Figure 4-3, preexisting models and data were used to compute the CASREP set-asides; e.g.,

(a) Combat history and consumption tables including combat KCMIA and WIA were developed from a European theater combat simulation within the Concepts Evaluation Model (CEM).

(b) Trooplists of combat units and their support units as well as the delivered support were developed using the Force Analysis Simulation of Theater Administrative and Logistic Support (FASTALS) Model.

(c) A density profile of the theater population described by three-digit specialty code (SSI) was developed as a function of time using utility routines.

(d) Replacement requirements were developed from the Patient Flow Model (PFM) by the equation: REQUIREMENTS = (KCMIA + WIA + DNBI) - RTD, where RTD is defined as "returns to duty."

(e) Personnel replacement requirements were stratified according to SSI by the Casualty Stratification Model (CSM). Personnel replacement rates are in the format: number of casualty replacements/day per 1000 population. Within WOSM, the CASREP set-aside for each specialty and grade is calculated according to the general formula:

$$\text{CASREP Set-aside} = (\text{Replacement Rate}) \times (\text{Number Authorizations}) \times (\text{Number Days in Theater}) \div 1000.$$

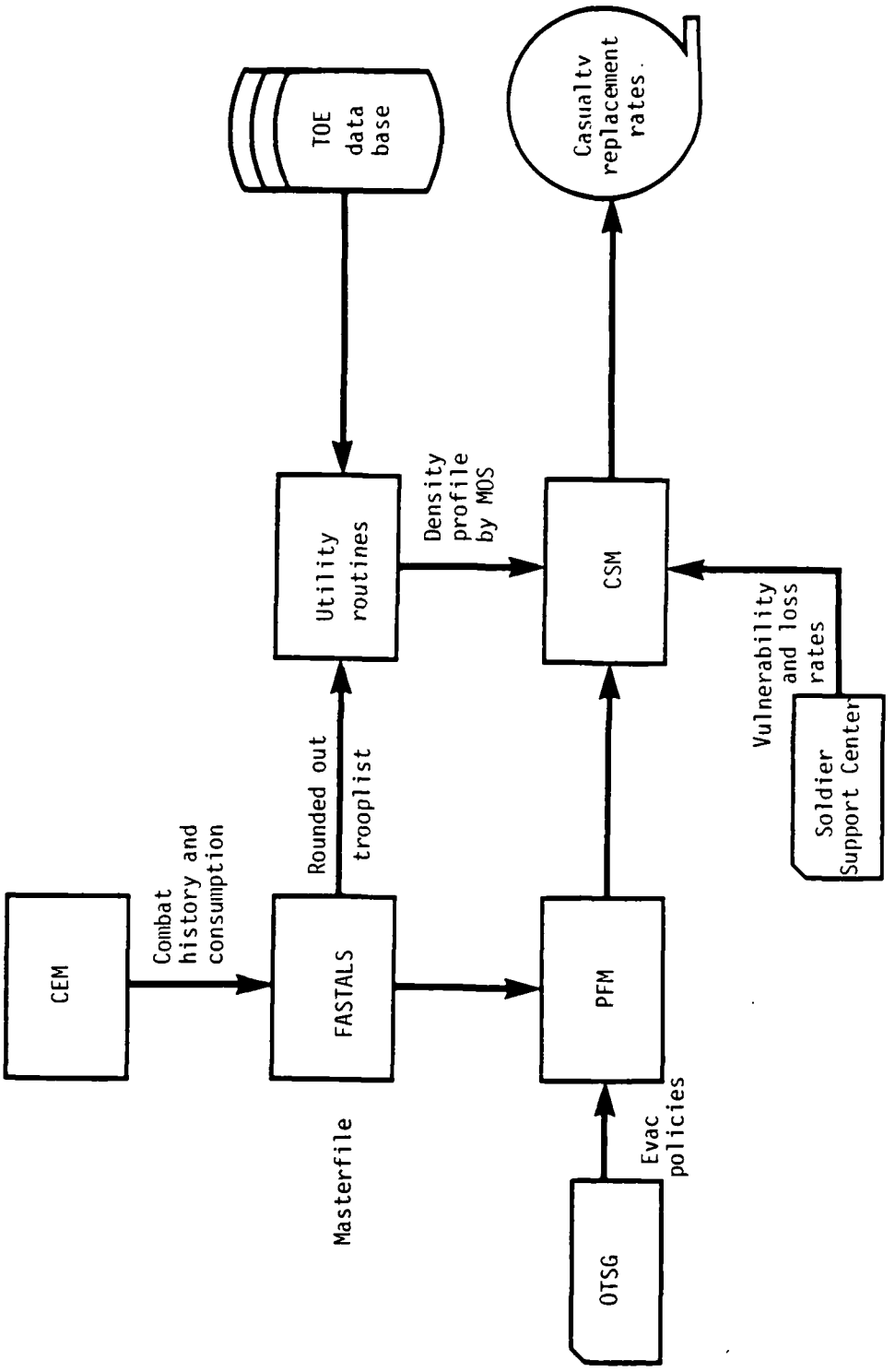


Figure 4-3. Flow Diagram of CASREP Set-Aside Computation

(3) CASREP Assumptions. Two underlying assumptions pertain to the CASREP set-aside computation. First, using available data, a NATO wargame scenario provided the casualty replacement requirement rates. The size of the force suffering casualties was approximated using the PERSACS male-only authorizations coded "OCONUS Long-Tour" and "CONUS." Only the "Short-Tour" authorizations were excluded from the approximation. Assuming all "OCONUS Long-Tour" forces would fight in the NATO theater may slightly inflate the theater population because some officers stationed in other "OCONUS Long-Tour" areas (e.g., Japan, Philippines) might be deployed to another theater. However, any inflation is offset by "Short-Tour" area assignees who might deploy to the NATO theater but are not included in this calculation. Secondly, it was assumed all forces would be fully deployed with their fighting units in the NATO theater, and the early required replacements would likely be reassigned from TDA activities. The replacements would not be reassigned from deployed units nor future-deploying combat units. These early-required replacements would fill the time gap until the pipe-line flow of trainees and reservists (IRR) begin to arrive at D+30, D+60, etc. Replacement rates are included in the WOSM CASRATE data file for D+30, D+60, and D+90.

(4) Career Progression (CARPRO). The purpose of the CARPRO set-aside is to ensure the grade structure within each specialty code accommodates the career promotion goals of the Army. Specifically, the model examines the ratio of male-only authorizations at each grade and normalizes all grades to the one representing the highest ratio of male-only to total authorizations. This set-aside ensures there is a corresponding percentage of male-only spaces at each higher grade to provide promotion opportunity from the male-only spaces at the adjacent lower grade. Concurrently, the algorithm ensures the "normalized" grade structure provides spaces for the resulting interchangeable authorizations also with corresponding promotion opportunity. It is important to note the CARPRO set-aside is applied to each specialty grade after each grade has been appropriately adjusted by the two preceding set-asides--ROTEQ and CASREP. Appendix D includes an example of the CARPRO set-aside computation.

b. Women Officer Authorizations. While the preceding discussion focused on calculating interchangeable authorizations, the following describes how WOSM converts interchangeable spaces to authorizations for women officers.

(1) Constrained Force. If left unconstrained, WOSM, using the revised set-asides, allocates 55 percent of the Army's officer authorizations as interchangeable, i.e., 32,074 of 57,963 spaces in the 1983 PERSACS, as shown in Table 4-1. An option available to enhance the credibility of WOSM constrains the number of interchangeable authorizations. This option enables the user to constrain the total number of interchangeables to a figure representing total women officer spaces. The total woman officer force is made up of these constrained authorizations plus those in the THS account (WOSM indicates an additional 19.8 percent of the force in the THS account). These constrained authorizations are input to the AGEBGPR Model and, with the THS inventory, determine the required annual accessions and steady-state force. An example would be to constrain WOSM authorizations to 7,535 plus 19.8 percent, or 1,865 officers, in THS for a total of 9,400 women officer strength ceiling. These constraints, when fed into AGEBGPR, indicate 900 accessions per year leading to a steady-state force of over 9,000.

(2) Preferred Distribution (PREDIS). The preferred distribution (PREDIS) also enhances the credibility of WOSM; it ensures the distribution of women officer authorizations is logical, generally conforms to expectations, and provides a force structure that is reasonable. If the distribution of authorizations is unrestricted (i.e., without PREDIS), the only factors in WOSM affecting distribution are the three set-asides--ROTEQ, CASREP, and CARPRO. However, these set-asides are primarily a function of the DCPC in TAADS, and insufficient spaces are coded combat (P1) to have WOSM generate a logical, reasonable force structure. For example, unrestricted authorizations would distribute more than 15 percent of the women officer spaces to combat arms specialties such as artillery and air defense. But 15 percent is excessive for the number of women desiring accession into the combat arms, and experience indicates this percentage exceeds the Army's current requirements. Therefore, the combat arms were assigned a more realistic 6 percent of the women officer accessions; and the remaining difference between 15 percent and 6 percent was distributed equitably among other accession specialties using PREDIS. A second example pertains to branching: some ADSPECs are logically paired with certain INSPECs, but this is not recognized in the AGEBGPR Model. For example, ADSPEC SC 54 (Operations, Plans, Training/Force Development) is logically paired with combat arms specialties such as SCs 11 and 12 (Infantry and Armor). In TAADS only one-quarter of one percent (¼ percent) of the SC 54 authorizations are coded combat, male-only (P1) compared to 85 percent of the combat arms spaces. Consequently, without PREDIS, WOSM distributes a disproportionately high number of interchangeable spaces to SC 54. PREDIS applied to branching more logically assigns ADSPECs according to service and individual needs. At Table 4-1 is a comparison of the unrestricted interchangeable authorizations with an example of PREDIS authorizations.

Table 4-1. Unconstrained, Unrestricted, and Preferred Distributions

SC	Unconstrained auth	Unrestricted distribution[a]		Preferred distribution	
		Auth	Percent	Auth	Percent
11	0	0	0.0	0	0.0
12	0	0	0.0	0	0.0
13	1,439	337	4.5	111	1.5
14	1,434	337	4.5	109	1.5
15	1,470	344	4.6	112	1.5
21	693	160	2.1	109	1.5
22	146	34	0.5	34	0.5
25	2,305	540	7.2	713	9.5
27	566	133	1.8	147	2.0
31	1,327	311	4.1	430	5.7
35	1,145	267	3.6	325	4.3
36	712	167	2.2	219	2.9
37	667	155	2.1	221	3.0
41	1,928	455	6.1	455	6.1
42	2,083	489	6.5	726	9.7
43	366	87	1.2	72	1.0
44	518	121	1.6	153	2.0
45	568	131	1.7	137	1.8
46	331	78	1.0	31	0.4
48	985	230	3.1	81	1.1
49	756	177	2.4	170	2.3
51	912	215	2.9	278	3.7
52	170	40	0.5	40	0.5
53	931	218	2.9	314	4.2
54	1,934	451	6.0	85	1.1
71	719	169	2.2	107	1.4
72	334	78	1.0	94	1.3
73	426	101	1.3	124	1.7
73	305	72	1.0	94	1.3
75	731	171	2.3	239	3.2
81	203	47	0.6	72	1.0
82	127	28	0.4	28	0.4
91	1,699	397	5.3	554	7.4
92	2,298	540	7.2	568	7.6
95	1,409	330	4.4	419	5.6
97	437	105	1.4	112	1.5
Total	32,074	7,515[b]	100	7,483[b]	100

[a]Proportional to unconstrained interchangeable authorizations.

[b]Rounded off from 7,535.

4-4. AGE BY GRADE AND PAIR (AGEBGPR). Once the number of officer authorizations available to women has been determined in WOSM, the resultant force structure requirements are read into AGEBGPR. This model accomplishes three functions.

a. Accessions. First, the AGEBGPR Model determines the number of lieutenants to be accessed for any fiscal year. A hypothetical company grade inventory (captains and lieutenants) by INSPEC is developed using a grade distribution matrix and continuation rate (C-RATE) data. NOTE: C-RATEs are discussed further in paragraph 4-5. Then authorization data from WOSM is used to modify the hypothetical distribution to correspond with accession requirements. Within the AGEBGPR accession routine, adjustments are computed to reflect actual requirements; e.g., lateral transfers can be read in to increase/decrease requirements for certain specialties. Finally, the number of accessions can reflect preset ceilings for each specialty, or the total number of accessions can be preset by the user.

b. Branching. The second major routine within the AGEBGPR Model determines a plan for branching officers in their eighth year of service (YOS). Whereas accessions are based on company grade authorizations, branching requirements are initially based on field grade authorizations. An intermediate requirement is determined by applying several factors to the field grade authorization requirement; e.g., percentage of officer's time spent within certain specialties (utilization rate), grade distribution, current year-group inventory, continuation rates, and number of officers in current year group previously branched. Then the proponent preference matrix is applied to these intermediate requirements; this enables career managers to correlate INSPEC and ADSPEC after essential field grade requirements have been satisfied. A minor change to AGEBGPR was made to reflect women officer branching propensity vis-à-vis male branching. For male officers, SC 54 is used as a sink/source to compensate for adjustments such as roundoff error. The sink/source was changed to Personnel Programs Management (SC 41), a specialty more compatible with women officer branching tendencies.

c. Steady state. The steady-state size of the women officer force is determined in the AGEBGPR Model. For example, the model would have to be run 30 times to age the force 30 years; output from the thirtieth run would give the size of the force in CY 2013 given the following: (1) initial input was the end FY 83 women officer inventory; (2) annual accessions were at a given rate (e.g., 900 lieutenants per year based on 7,535 constrained authorizations from WOSM plus 1,865 officers in the THS account); and (3) the force was aged using the projected continuation rates. The approximate force size (within 5 percent of steady state) is reached in 15 years as the force varies 1 percent or less per year after the fifteenth year. The number of officers branched annually reaches steady state in the eighth year (1991); the year 1991 represents the year in which the first year group

accessed by the model is subsequently branched. Computer time can be conserved by repeating the aging process within the model fewer than 30 times if an approximation of steady state is acceptable. Figure 4-4 depicts how steady state is reached given 900 accessions per year.

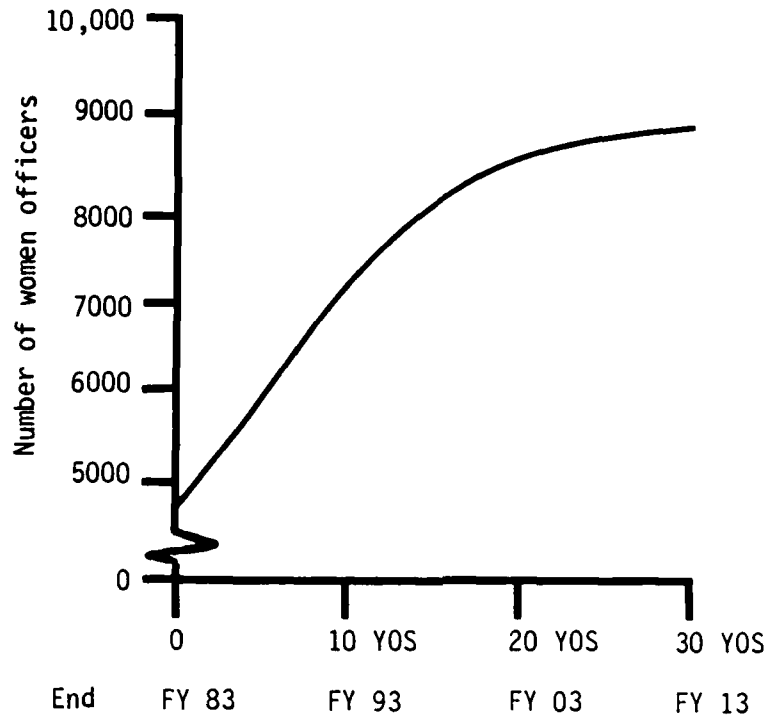


Figure 4-4. Women Officer Strength

4-5. CONTINUATION RATES (C-RATE)

a. The likelihood of an officer continuing in the service from one year to the next is indicated by the pertinent C-RATE; e.g., in Table 4-2, a C-RATE of .880 indicates 88 percent of the officers with 5 years of ser-vice in SC 42 will complete 6 years of service. Multiplying consecutive C-RATEs beginning with the first year of service gives the expected survivability of officers serving in a specialty. Survivability is the cumulative likelihood of remaining in the service through a particular year of service; e.g., Table 4-2 indicates 36 percent of the officers accessed into SC 42 will remain in service for 13 years. Figure 4-5 is the survivability curve for women officers in SC 42. Survivability curves for other specialties are at Appendix E.

Table 4-2. Current Continuation/Survivability Data for Administrative and Personnel Systems Management (SC 42) (Female)

YOS	C-RATE	Surv	YOS	C-RATE	Surv
1	.999	.999	11	.952	.385
2	.981	.980	12	.957	.369
3	.982	.962	13	.975	.360
4	.847	.815	14	.971	.349
5	.855	.697	15	.962	.336
6	.880	.613	16	.900	.302
7	.903	.554	17	.999	.302
8	.886	.491	18	.999	.302
9	.895	.439	19	.999	.301
10	.922	.405	20	.833	.251

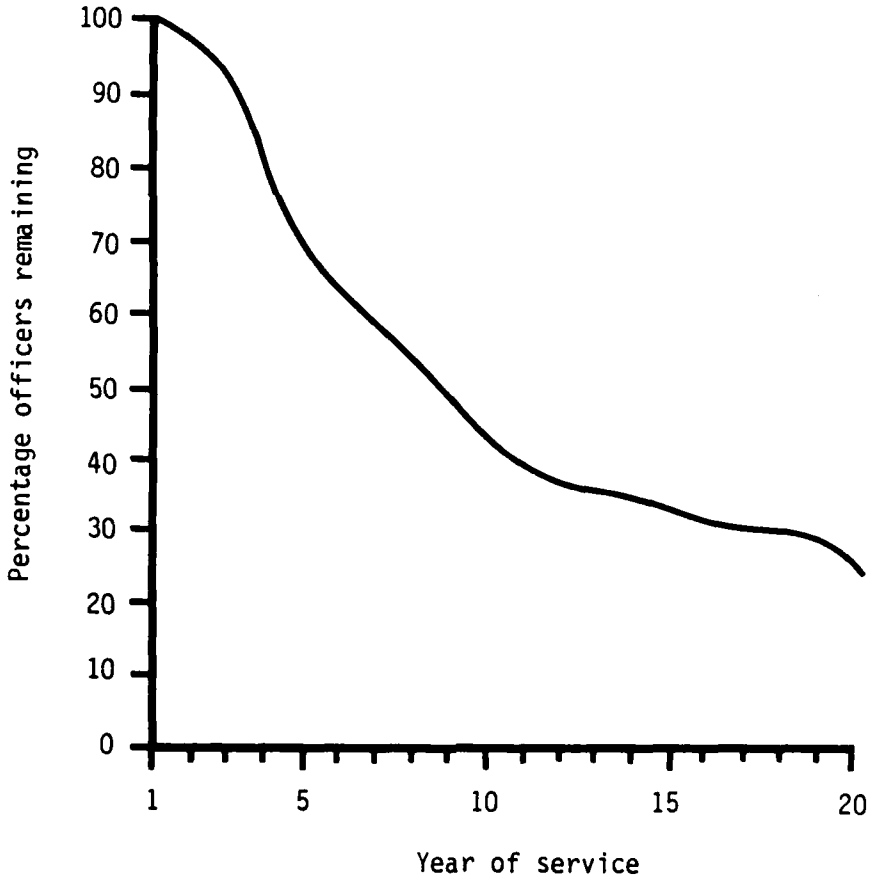


Figure 4-5. Survivability Curve for Administrative and Personnel Systems Management (SC 42) (Female)

b. Projected Survivability Data. Although the preceding data in Table 4-2 appear valid, continuation data for several other specialties were incomplete (i.e., blank cells) and based on small sample sizes. But it was observed the sample size for women officers was sufficient if all specialties were combined to give overall women officer C-RATEs and survivability. The formula depicted below was developed to project survivability of female officers in specialty codes where the continuation data were not meaningful. As more complete continuation data are recorded, empirical data should replace data points obtained from the estimating formula

$$PFSCDEX = (FSDEX \div SDEX) \times SCSDEX$$

where:

PFSCDEX is the female survivability index for individual specialty codes projected for each year of service (**P**rojected **F**emale **S**pecialty **C**ode Sur-vivability In**DEX**

FSDEX is the current survivability index for women officers for all specialty codes combined (**F**emale **S**urvivability In**DEX**)

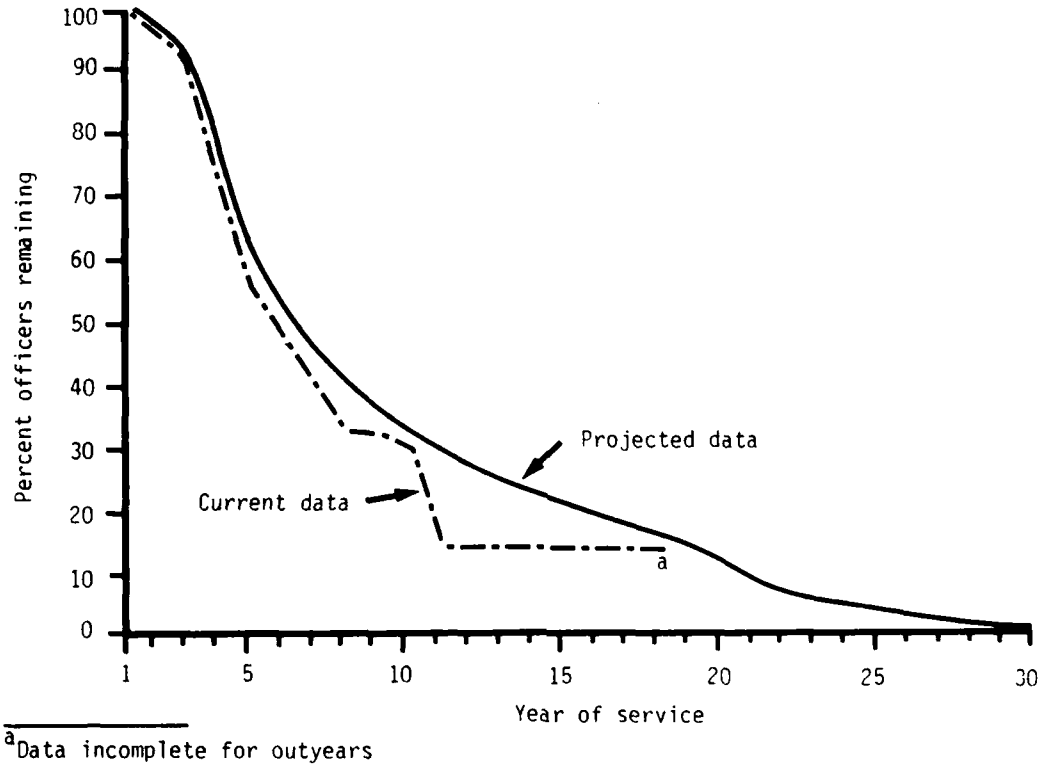
SDEX is the current survivability index for all officers (male and female), all specialty codes combined (**S**urvivability In**DEX**, all officers)

SCSDEX is the current combined male-female survivability index for each individual specialty code (**S**pecialty **C**ode **S**urvivability In**DEX**, all officers)

Table 4-3 presents the data used for a typical INSPEC to develop adjusted C-RATE and survivability. In this example the rightmost column, Current C-RATE, reflects the continuation rate data currently on file for SC 25. The repetitive entries of .999 and .000 exemplify the incomplete nature of current women officer continuation data for individual specialties. Figure 4-6 compares the projected survivability curve to the current data for SC 25.

Table 4-3. Continuation/Survivability Data for Communications-Electronics (SC 25) (Female)

YOS	SDEX	FSDEX	$\left(\frac{\text{FSDEX}}{\text{SDEX}}\right)$	SCSDEX	Projected surv (PFSCDEX)	Projected C-RATE	Current C-RATE
1	.999	.999	1.00	.999	.999	.999	.999
2	.980	.975	.99	.988	.983	.984	.980
3	.952	.937	.98	.964	.950	.966	.959
4	.861	.784	.91	.867	.789	.831	.820
5	.751	.656	.87	.736	.643	.814	.785
6	.676	.585	.87	.660	.571	.889	.886
7	.612	.516	.84	.589	.497	.870	.861
8	.560	.471	.84	.529	.445	.894	.837
9	.527	.448	.85	.491	.418	.941	.999
10	.508	.409	.81	.476	.383	.917	.941
11	.486	.379	.78	.452	.353	.920	.600
12	.464	.356	.77	.421	.323	.916	.999
13	.438	.342	.78	.392	.306	.946	.999
14	.424	.329	.78	.375	.291	.952	.999
15	.408	.323	.79	.353	.279	.959	.999
16	.378	.299	.79	.308	.243	.872	.999
17	.362	.292	.81	.293	.237	.972	.999
18	.346	.278	.80	.284	.229	.967	.999
19	.330	.262	.79	.272	.216	.943	.000
20	.313	.220	.70	.265	.186	.861	.000
21	.244	.179	.73	.191	.140	.753	.000
22	.200	.117	.58	.152	.089	.635	.000
23	.167	.077	.46	.133	.061	.685	.000
24	.147	.067	.46	.120	.055	.902	.000
25	.125	.045	.36	.097	.035	.632	.000
26	.108	.022	.21	.084	.017	.498	.000
27	.093	.011	.12	.068	.008	.474	.000
28	.077	.011	.14	.050	.007	.887	.000
29	.052	.002	.04	.034	.001	.200	.000
30	.038	.002	.06	.023	.001	.940	.000



[a]Data incomplete for outyears

Figure 4-6. Projected Survivability Curve for Communications-Electronics (SC 25) (Female)

c. Projected Survivability Data for ADSPECs. Reliable continuation data is not available until year-of-service nine for ADSPECs because most officers (approximately 85 percent) are not assigned an additional specialty until their eighth year of commissioned service. Therefore, ADSPEC continuation data were approximated for the first 8 years of service by using female continuation data combined for all specialties. Subsequently, beginning with YOS nine, the current data was used in the formula, PFSCDEX = (FSDEX + SDEX) x SCSDEX, to establish continuation rate data. For SC 54, Table 4-4 indicates the combined female survivability data (FSDEX) replaces the first 8 years of survivability data (see the boxed numbers). This gives a projected female survivability rate by specialty code (PFSCDEX) equal to the overall female rate (FSDEX) only for the first 8 years. Thereafter, the PFSCDEX is calculated by applying the estimating formula to current specialty code continuation data.

Table 4-4. ADSPEC Continuation/Survivability Data for Operations, Plans, Training/Force Development (SC 54) (Female)

YOS	SDEX	FSDEX	$\left(\frac{FSDEX}{SDEX}\right)^a$	SCSDEX	Projected surv (AFSCDEX)	Projected C-RATE	Current C-RATE
1	--	--	--	.999	.999	.999	.999
2	--	--	--	.975	.975	.976	.000
3	--	--	--	.937	.937	.961	.000
4	--	--	--	.784	.784	.837	.000
5	--	--	--	.656	.656	.836	.000
6	--	--	--	.585	.585	.892	.000
7	--	--	--	.516	.516	.883	.000
8	--	--	--	.471	.471	.912	.999
9	.443	.448	1.00	.447	.447	.950	.909
10	.427	.409	.96	.438	.420	.938	.999
11	.409	.379	.93	.420	.390	.929	.999
12	.390	.356	.91	.401	.366	.939	.000
13	.369	.342	.93	.390	.362	.988	.999
14	.356	.329	.92	.374	.346	.956	.000
15	.343	.323	.94	.360	.339	.979	.000
16	.318	.299	.94	.334	.314	.928	.999
17	.304	.292	.96	.323	.310	.987	.999
18	.290	.278	.96	.311	.297	.958	.999
19	.277	.262	.94	.293	.277	.932	.000
20	.263	.220	.83	.284	.237	.855	.000
21	.205	.179	.87	.232	.203	.857	.999
22	.168	.117	.70	.203	.141	.697	.750
23	.141	.077	.54	.176	.096	.678	.999
24	.124	.067	.54	.159	.086	.899	.999
25	.105	.045	.42	.137	.058	.673	.000
26	.091	.022	.25	.124	.030	.523	.000
27	.078	.011	.14	.104	.015	.491	.000
28	.065	.011	.17	.087	.015	.999	.999
29	.044	.002	.05	.062	.003	.214	.999
30	.032	.002	.07	.048	.003	.999	.000

[a]Ratio limited to 1.00 maximum.

CHAPTER 5

STUDY RESULTS

5-1. INTRODUCTION. This chapter presents the analytical results of the study. A base case was selected to verify the output of the two models where the parametric values used were representative, i.e., they provided reasonable results. Other values can be easily substituted in the models. For this study several variations (sensitivity analyses) of the base case were run to analyze the direction and magnitude of changes.

5-2. MODEL PARAMETERS AND COMPUTER RUNS. As indicated in Table 5-1, various parametric values were selected for 10 computer runs; the results of these runs were then analyzed to determine the effect of changing the parameters.

a. Base Case. Selection of parametric values for the base case was not arbitrary; the values were selected to give results that were believed to be reasonable. For example; the projected female C-RATEs were used because, historically, the careers of women officers have been shorter than male officers. Longer survivability is reflected by the combined male-female C-RATEs. A constrained target strength of 7,535 women officer authorizations, plus 1,865 in the THS account, was selected to call for 900 women officer accessions annually. A steady-state strength of over 9,000 women officers will be attained after aging the force over 30 years. For the CASREP set-aside, D+30 was chosen as an example to define those casualties to be replaced from active, nondeploying units through D+30; at D+30 the replacement pipeline would begin to provide casualty replacements. Fortyeight (48) months was selected as a representative minimum CONUS tour length for the ROTEQ set-aside. (NOTE: A detailed discussion of WOSM set-asides is in Chapter 3, paragraph 3-2.) The female preference matrix is used in the base case to reflect the proponents' considerations regarding branching female vis-à-vis male officers into their ADSPECs. The final parameter included in the base case is PREDIS; the preferred distribution was selected to provide a logical, reasonable distribution of women officer authorizations, accessions, and ADSPECs among the various specialty codes.

b. Run 02. Aging the force and computing accessions using the combined male-female C-RATEs instead of the projected female C-RATEs causes the number of women officer accessions to decrease. Fewer annual accessions are required because the steady-state force (authorizations plus THS) is unchanged while the survivability is increased because male officers are included in the C-RATE data. Similarly, more women are available to be branched in their eighth year because the male-female C-RATEs indicate they remain in the service longer. These results are shown at Table F-1.

Table 5-1. Model Parameters: Base Case and Alternatives

Run number	C-RATEs	Target strength	CASREP	CONUS tour length	Pref matrix	SC distrib	Other
01 (base case)	Projected female	7,535 spaces	D+30	48 mos	Female	PREDIS	
02	Male-female	a	a	a	a	a	
03	a	a	D+60	a	a	a	
04	a	a	D+90	a	a	a	
05	a	a	a	24 mos	a	a	
06	a	Unconstr	a	a	a	a	
07	a	a	a	a	Male-female	a	
08	a	a	a	a	a	a	Presets
09	a	a	a	a	a	a	Decrease U-RATEs
10	a	a	a	a	a	Unrestr	

[a]Same as base case.

c. Runs 03 and 04. Delaying activation of the casualty replacement pipeline by 30 or 60 days until D+60 or D+90 was accomplished in Runs 03 and 04. Because more casualties occurred during the extended time periods, the male-only set-asides increased thereby reducing the number of interchangeables. Refer to Table F-2.

d. Run 05. The minimum time required for a male officer to remain in CONUS after returning from an OCONUS tour was decreased from 48 to 24 months. Consequently, fewer ROTEQ set-asides were required, and the number of interchangeable authorizations increased. See Table F-3.

e. Run 06. This is an unconstrained run wherein no authorization ceiling for women officers was specified. These results were used to compare the original and revised WOSM interchangeable authorizations. It was found the number increased from 25,673 to 32,074 interchangeables, and annual accessions exceeded 3,000. (This data was summarized in Chapter 4, Table 4-1.)

f. Run 07. This run was used to compare branching with the male-female proponent preference matrix vis-à-vis the female PPM. No significant change was found.

g. Run 08. The number of women officers to be accessed into any or all specialties can be preset as an input parameter. If all accession specialties are predetermined, then the accession presets (input) equal the annual accessions (output). However, the presets do not affect the ADSPEC branching routine. Refer to Table F-4.

h. Run 09. A decreased utilization rate in any specialty code indicates officers will serve fewer tours in that specialty. Therefore, decreased U-RATEs reflect increased officer requirements in the affected specialties. See Table F-5.

i. Run 10. Without a preferred distribution, the number of interchangeable authorizations is restricted only by the set-aside computations. The set-asides, as previously discussed, are determined directly from the combat coding in TAADS. Consequently, Run 10 reflects the unrestricted distribution of women officer authorizations as a function of DCPC coding only. Factors such as logical pairing of ADSPECs and annual accession limitations are not reflected. Table 4-1 depicts a comparison of authorizations for the unrestricted and preferred distributions; Table F-6 compares the accession requirements.

j. Additional Data. In addition to the data already shown, several other tables are included at Appendix F to provide a more complete understanding of the model runs.

(1) Tables F-7 through F-28 present the base case inventory of women officers for FY 1983 through FY 1991, FY 1998 and FY 2013. These data represent the beginning inventory (FY 83) obtained from the OMF data file; the inventory subsequently aged for 8 years (FY 84 through FY 91); and the inventory aged until the fifteenth year when the size of the force is

within three percent of steady state (FY 13). These tables are presented alternately by year group and by specialty code for the officer ranks, lieutenant through colonel.

(2) Tables F-29 and F-30 depict for the base case the accessions by specialty code and branching assignments for 8 years, YG 77 through YG 84. (NOTE: ADSPEC designations after 8 years remain constant because the number and distribution of officers accessed each year is maintained constant in the test runs.

(3) Table F-33 displays a comparison of WOSM authorizations for the unrestricted and preferred distribution cases, constrained to 7,535 authorizations. It includes the percentage of total PERSACS and the percentage of women officers that the authorizations represent. Some of the data in this table also appears in Table 4-1.

5-3. FINDINGS. The purpose of this paragraph is to present the major analytical results developed in the course of the OASYS Study. The effect of parametric changes within each of the models was carefully examined.

a. WOSM. Analysis of WOSM output indicated there was moderate sensitivity to changes in values of the input parameters.

(1) Revised WOSM increased the number of interchangeables by 25 percent, from 25,673 to 32,074 authorizations. These increases derive from the changes in set-aside computations discussed in Chapter 3. See Table 5-5, paragraph 5-3d for further definition.

(2) The male-only set-asides are increased by 15 percent when the CASREP input parameter is changed from D+30 to D+90. See Table F-1, Appendix F. However, the interchangeable authorizations are only decreased by 2 percent under these same conditions.

(3) The male-only set-asides are decreased by 3 percent when the CONUS tour length is reduced from 48 to 24 months; conversely, interchangeable authorizations are increased by 1 percent. See Table F-2, Appendix F.

(4) Examining the male-only set-asides for each specific specialty code, for both CASREP and ROTEQ in Tables F-1 and F-2, Appendix F, reveals that not every specialty is affected by a variation in CASREP or ROTEQ. For some specialties the set-asides remain constant; e.g., SC 22, SC 27, SC 41 for CASREP and SC 25, SC 35, SC 74 for ROTEQ. A set-aside does not necessarily change as one input parameter changes because one of the other input parameters may dominate for that particular specialty; e.g., CASREP is dominated by either ROTEQ or CARPRO for SC 41.

(5) The distribution of interchangeable authorizations available for women officers is not affected by existing relationships between certain specialties; e.g., SC 54 with the combat arms. Therefore, a preferred distribution (PREDIS) by specialty code of interchangeable authorizations for women officers is required to reflect these existing relationships and/or other personnel management requirements.

(6) The model does not recognize gender preference; i.e., without PREDIS the model does not recognize the affinity of women for certain specialties such as administration/personnel. The PREDIS is applied to distribute the authorizations logically.

b. AGEBGPR. Refer to Appendix F for tables detailing the data pertinent to the findings:

(1) AGEBGPR projects accessions based on a projected steady-state force size and distribution.

(2) Complete data are unavailable to define women officer C-RATEs; projected C-RATE data must be verified and updated on a continuing basis.

(3) Constraining the interchangeable authorizations (WOSM output) as input to AGEBGPR can define women officer requirements for:

(a) Annual lieutenant accessions.

(b) Branching the year group currently in their eighth year of service.

(4) Combined male-female C-RATEs, instead of the projected C-RATEs for women officers, decreases women officer accessions by 11 percent (refer to Table F-3). This occurs because applying the combined male-female C-RATEs to women officers increases their survivability, i.e., combined male-female C-RATEs project longer service careers.

(5) Accession and branching requirements are virtually the same whether the female proponent preference matrix or the combined male-female PPM is used.

(6) Varied utilization rates (U-RATEs) affect branching but not accession requirements (see Table F-5). Increased utilization in a specialty (i.e., more frequent assignments in a specialty) decreases personnel requirements accordingly. NOTE: U-RATEs affect only the branching routine.

(7) AGEBGPR can update the women officer inventory after each year-group is run (successive repetitions) to reach a projected steady-state inventory. After 8 years, the force is increased by 56 percent given 900 accessions per year with the projected C-RATEs. Branching assignments have reached steady state in 8 years because the first year-group accessed by the model in FY 84 is branched in FY 91. Tables F-29 and F-30 depict these results.

c. Excessive Branching to SC 54. Review of the accession and designation output data from trial computer runs (without PREDIS) indicated the percentage of YG 77 female officers designated ADSPEC SC 54 was dominant, e.g., 44 of 218 (20 percent) women were branched to SC 54 in one year compared to the 28 total remaining from all prior years. This result contradicts expectations wherein SC 54 (Operations, Plans, Training/Force

Development) is a logical ADSPEC pair with combat arms specialties. It is not logical to expect a dominant percentage of women officers to be branched into SC 54 because Army policy limits the accession of women into combat positions of the combat arms specialties.

(1) Several factors affect the determination of ADSPECs within the AGEBGPR Model, e.g., the number of field grade authorizations in a specialty, the current year-group inventory, the number of current year-group officers previously branched, the officers' grade distribution, continuation rates for each specialty, and utilization (U-RATEs) of officers in their INSPEC vis-à-vis their ADSPEC. After examining these factors, AGEBGPR applies the proponent preference matrix (PPM) to develop INSPEC/ADSPEC pairing requirements. In the case of SC 54, however, two factors dominate the pairing process: (a) the severe shortage of SC 54 in the FY 83 inventory compared to other specialties branched prior to FY 84, and (b) the large number of SC 54 interchangeable authorizations determined in WOSM. These two factors in the initial unrestricted runs caused an excessive number of SC 54 to be branched in FY 84, essentially overriding proponent preference. Table 5-2 compares two specialties, SC 41 and SC 54, having similar interchangeable authorizations (requirements) but significantly different branching designations. Proponent preference, among other factors, was not effective; and the inventory shortage of SC 54 dominated the branching routine in the unrestricted case. Despite indications from the preceding case (without PREDIS), proponent preference does affect the branching process in other cases. The PPM may be overridden until several successive year groups have been branched thereby compensating for the shortage of women officers in a particular specialty. Once steady state is reached, the PPM will logically apportion ADSPECs among various INSPECs.

Table 5-2. Branching for SC 41 and SC 54 (Female), Without PREDIS

	SC 41[a]	SC 54[b]
Number of interchangeable authorizations	455	451
FY 83 officer inventory (all grades)	277	28
YG 77 officers branched prior to FY 84	21	0
YG 77 officers branched in FY 84 (unconstrained)	16	

[a]Personnel Programs Management.
[b]Operations, Plans, Training/Force Development.

(2) A more logical set of ADSPEC designations is obtained when the number of women officer authorizations is based on the preferred distribution (PREDIS) rather than the unrestricted authorizations. For comparison, PREDIS indicated eight YG 77 officers are to branch into SC 54, whereas unrestricted authorizations indicates 44 officers branch into SC 54 from the same year-group.

(3) Another method to develop realistic ADSPEC designations is to directly correlate the year-group population with proponent preference. This procedure is independent of the number of authorized spaces within any specialty code and is independent of the number of officers already holding any specific ADSPEC. The number of ADSPEC designations into any specialty is only dependent on the number of officers available for ADSPEC, their INSPEC distributions, and the PPM. Table F-31 displays proponent preference; Table F-32 displays the result of branching using this simple algorithm which considers only two factors: (a) proponent preference, and (b) current year-group inventory.

(4) A comparison of the preceding analytical results regarding branching into SC 54 is shown in Table 5-3. In summary, the unrestricted case reflects the effect of a large SC 54 requirement (authorizations) combined with few officers currently designated the SC 54 specialty. The PREDIS case represents a more compatible relationship for branching into SC 54 from the combat arms specialties. The PPM case indicates the number of female officers to be branched into SC 54 by applying the PPM to the current group inventory for each INSPEC, essentially disregarding authorization requirements as well as other factors.

(5) The method used to overcome disproportionate branching assignments was discussed in detail in Chapter 4. The PPM method discussed in subparagraph 5-2c(3) was accomplished off-line from WOSM and AGEBGPR.

5-4. ESSENTIAL ELEMENTS OF ANALYSIS (EEA). The EEA which guided the conduct of the study are stated and discussed below.

a. What is the adequacy of the current procedures to determine the INSPEC/ADSPEC assignments for women officers? The current method was found inadequate. The OASYS Study was undertaken specifically to review the adequacy of the current method of INSPEC/ADSPEC assignments for women officers. WOSM overly restricted the number of authorizations available to women officers and did not consider continuation rates; however; it was the only computer-based system available to facilitate the specialty code assignment process. Also WOSM was not designed to ADSPEC officers.

Table 5-3. Comparison of Branching Methods (YG 77, SC 54)

INSPEC	Unrestricted authorizations	Preferred distribution	Proponent preference matrix (PPM)
13			
14			
15			
21	1		
25	9	2	2
31	3	1	1
35	3	1	1
36	2	1	
37	1		
42	11	1	1
43	1		
44			
46			
48			
71			
72	1		
73			
74	1	1	1
75	2	1	
81			
82			
91	2		
92	2		1
95	5		1
Total	44	8	8

NOTE: Numbers in body of table indicate number of women officers branched to SC 54 according to method listed in column headings.

b. What are the constraints (e.g., set-asides, management factors, grade—space ratio) that appear ultraconservative and could restrict career progression of women officers? WOSM in its revised form includes some constraints designed similarly to those in the original version of WOSM. However, the method of computation has been changed, in some cases drastically, to remove any bias and to ensure equity and fairness. The original version of WOSM examined four set-asides. The first of the four was the Promotion set-aside. In its computation, a term called "combat ratio" was developed and used to normalize the structure within any particular specialty. Essentially the highest ratio of combat (male-only) spaces to the total number of spaces for each grade was computed, and

grades with lower combat ratio were correspondingly raised. This was designed to eliminate choke points in the structure and normalize the promotion pattern. The next set-aside combined two factors--Professional Development and Mobilization. The underlying formulae to calculate the Professional Development set-aside was incorrect because the individuals account (THS), which is undocumented in TAADS, was used to factor up (increase) the number of documented male-only authorizations by specialty code. This caused an arbitrary number of spaces to be set aside. For mobilization, one space was set aside for every male-only authorization, suggesting every male-only space would require one casualty replacement regardless of specialty. Consequently, this set-aside was inflated because not all male-only authorizations would necessarily be in a combat theater, nor would different specialty codes suffer identical casualty rates. Fourthly, regarding the Rotation set-aside, its method of calculation has been changed to eliminate the redistribution of spaces among CONUS, long- and short-tour areas. It was observed the redistribution formulae did not provide a precise allocation of rotation set-asides because of round-off computation. Prior to computing the remaining interchangeables for each specialty code, the original WOSM selected the largest of the four set-aside values and decremented the appropriate pool of interchangeable authorizations. Additionally, there was an option for a management requirement set-aside, but this program coding had been deactivated. Essentially this set-aside established a ceiling for the number of females which could be assigned any specialty code. Finally the capability to constrain the total number of female officer authorizations was transferred from the original to the latest version of WOSM. It is important to note, however, an important assumption underlies all WOSM calculations: it is assumed the number of interchangeable authorizations calculated in WOSM theoretically could be all female. Historically, this number has been considered excessive when compared to the number of women available to be accessed; also the relationship between operational readiness and the percentage of authorizations filled by women officers has been of concern. From the original WOSM, 30 percent of total officer authorizations could be filled theoretically by women; revised WOSM authorizes up to 55 percent female officers. Description of the current set-aside computation is in Chapter 4.

c. What are suitable alternative constraints? The alternative set of set-asides developed for WOSM are Rotation Equity (ROTEQ), Casualty Replacement (CASREP), and Career Progression (CARPRO). The ROTEQ set-aside provides a balance between CONUS and OCONUS male-only spaces to meet minimum CONUS tour length objectives. The CASREP set-aside reserves sufficient interchangeable spaces for males to replace casualties based on predicted replacement rates. After the maximum of these two set-asides is chosen, the CARPRO set-aside is computed. The CARPRO set-aside logic examines the remaining interchangeable spaces to ensure grade structure accommodates normal career progression for male and female officers. Next, female officer authorizations can be constrained to approximate some steady-state number predetermined by the model user. Also, a preferred distribution of women among the specialties can be determined by prescribing an appropriate percentage of spaces be distributed to designated specialties. Finally, a numerical ceiling could be preset for selected specialties.

d. How would the projected women officer accessions as computed using selected alternative constraints compare with those using the present model? Generally there was a 25 percent increase in the unconstrained number of spaces open to women officers. Table 5-4 presents a pertinent comparison.

Table 5-4. Effects of Alternative Constraints, WOSM Model

Set-asides	Original WOSM authorizations	Revised WOSM authorizations
Professional development/mobilization	11,967	--
Promotion	273	--
ROTEQ	769	663
CASREP	--	1,281
CARPRO	--	5,417
Total PERSACS authorizations combat spaces	57,963	57,963
Total male-only spaces set aside (set-asides)	32,290	25,889
Maximum interchangeable strength	25,673	32,074

e. Using alternative constraints, what will be the distribution of women officers by grade and by SSI for each fiscal year through FY 89? Following is Table 5-5 presenting the base case distribution of women officer accessions and branching authorizations by SC for one year (FY 84). The tables in Appendix F display the projected INSPEC and ADSPEC authorizations by specialty code (SC) from FY 83 through FY 91. (NOTE: the summary of authorizations by SC instead of SSI is suitable because career managers access officers and designate their ADSPEC by SC vice SSI). And FY 91 vice FY 89 data are presented because branching requirements reach steady-state after FY 91 when YG 84 accessions have been designated tneir respective ADSPEC.

Table 5-5. FY 84 Women Officer Authorizations and a Plan for Accessions and Branching

SC	Authorizations plus THS	Accessions (FY 84)	Branching (YG 77)
11	0	0	0
12	0	0	0
13	140	20	0
14	141	21	0
15	136	16	0
21	138	16	0
22	43	0	1
25	893	137	0
27	183	21	10
31	557	78	0
35	409	42	0
36	272	31	0
37	280	34	8
41	565	0	23
42	907	113	0
43	85	0	2
44	188	24	0
45	176	0	13
46	38	0	1
48	102	0	9
49	212	0	18
51	344	0	23
52	49	0	3
53	394	0	33
54	104	0	9
71	135	0	5
72	119	17	3
73	153	25	5
74	117	19	0
75	300	42	9
81	90	13	4
82	37	5	2
91	692	5	8
92	706	67	18
95	525	68	2
97	134	0	9
Total	9,344[a]	898[a]	218

[a]Quantities rounded off from 9,400 and 900.

APPENDIX A

STUDY CONTRIBUTORS

1. STUDY TEAM

a. Study Director

Mr. Wilbert Schwartzapfel, Force Systems Directorate

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APPENDIX B

STUDY DIRECTIVE

DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR PERSONNEL
WASHINGTON, DC 20310

REPLY TO ATTENTION OF

DAPE-MPD-PO

1 SEP 1983

SUBJECT: Officer Assignment System Study (OASYS)

Director
U.S. Army Concepts Analysis Agency
8120 Woodmont Avenue
Bethesda, Maryland 20814

1. PURPOSE. This directive provides tasking and guidance for the conduct of a study to define the potential for optimizing the male/female mix of officers in the Army. In so doing, the procedure to determine the number of women lieutenants to be accessed each fiscal year, by initial specialty code (INSPEC), will be validated. In addition, it will establish a methodology to define the requirements for additional specialties (ADSPEC) for women officers.

2. REFERENCE.

a. Final Report of the Women in the Army Policy Review Group (WITAPRG), 12 November 1982.

b. Chief of Staff Memorandum 83-5-3, Initiatives to Improve Readiness, 10 January 1983.

3. BACKGROUND. Since 1972, the Army has been accessing larger numbers of women officers into its ranks. The Women Officer Strength Model (WOSM) is currently used to define the number of accessions, by specialty code, of the women officers each year. These numbers are limited by the Combat Exclusion Policy (CEP) established for women and by the requirement for equity for both men and women in promotion opportunity, professional development, rotation assignments, and for reasonable CONUS tour lengths. The findings and recommendations of the WITAPRG, reference 2a, added additional detail and resolution to the CEP. This revision of the CEP, implemented through the Direct Combat Probability Coding (DCPC) System, identifies positions where women officers may serve.

4. STUDY SPONSOR. Office of the Deputy Chief of Staff for Personnel (ODCSPER).

5. STUDY AGENCY. U.S. Army Concepts Analysis Agency (CAA).

DAPE-MPD-PO 1 SEP 1983
SUBJECT: Officer Assignment System Study (OASYS)

6. TERMS OF REFERENCE.

a. Problem. The primary tool used to define the number of women officer accessions each year by specialty code, the WOSM, has built-in fixed constraints. These constraints limit the number of women officers to be accessed and/or provide high concentrations within a few specialty codes, as the revised CEP is implemented. Under the revised CEP the number of specialty codes available to women officers may be reduced. The criteria for accessing women officers and assigning them a specialty code, as established within the WOSM, needs to be reassessed. This project should identify the INSPEC and ADSPEC requirements, and provide for suitable career progression for women officers.

b. Objectives.

(1) Review the current methodology used to determine the accessions requirements and INSPEC/ADSPEC assignments for women officers.

(2) Define those constraints that limit the number of accessions to include "set asides," "management factors," and "grade-space ratio."

(3) Modify the methodology to allow flexibility in these constraints, within a rationale that is reasonable and supportable.

(4) Evaluate the impact of the modifications on women officer accessions, INSPEC/ADSPEC assignments, and career progression.

(5) Transport the methodology developed and/or model modifications to MILPERCEN.

c. Scope.

(1) The approved findings and recommendations of the WITAPRG will be included, where applicable.

(2) The approved personnel authorizations will be utilized during this study.

(3) The women Warrant Officers and those of the Special Branches--the Surgeon General, the Judge Advocate General, and the Chaplains--will not be considered for an ADSPEC. The current projections for women officers in these branches will be utilized.

DAPE-MPD-PO
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d. Constraints.

(1) Women officers will not serve in positions with a DCPC of P1.

(2) Specialty codes will be delineated by Specialty Skill Identifier (SSI).

(3) The same data and factors of the current personnel models such as WOSM, the Target Inventory Model (TIM), and other sub-models of the Officer Force Management Model (OFMM) will be applied to this study.

e. Assumptions.

(1) The force structure, the personnel authorizations, and the associated combat coding of the OFMM and sub-models will provide the basis for the steady state personnel target mix of this study.

(2) Historical data of personnel distribution and continuation rates by year group, grade, SSI, and gender are available through MILPERCEN.

f. Essential Elements of Analysis (EEA).

(1) What is the adequacy of the current procedures to determine the INSPEC/ADSPEC assignments for women officers?

(2) What are the constraints (e.g. "set asides," "management factors," and "grade-space ratios") that appear ultra-conservative and could restrict the career progression of women officers?

(3) What are suitable alternative constraints?

(4) How would the projected women officer accessions as computed using selected alternative constraints compare with those using the present model?

(5) Using alternative constraints, what will be the distribution of women officers, by grade and by SSI, for each fiscal year through FY 89?

(7) RESPONSIBILITIES.

a. CAA is authorized direct communication with DA, Major Army Commands (MACOM), and all agencies involved in establishing officer personnel requirements.

b. The study sponsor will support CAA in accumulating any required data, in defining those parameters where hard data are unavailable, and other technical support, as appropriate.

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c. MILPERCEN will provide background information and/or briefings on the existing personnel planning system and extract for, and transmit to, CAA those personnel data files, models, and reports as requested.

8. ADMINISTRATION.

a. Support.

(1) Funds required for TDY, per diem, overtime, etc., are the responsibility of each study participant.

(2) Administrative support will be furnished by the study agency.

b. Milestone Schedule.

(1) ODCSPER provision of required data to CAA.	15 September 1983
(2) Methodology development and testing	
Preliminary Analysis	15 November 1983
Assignment System Evaluation	15 January 1984
(3) Final Report	15 February 1984

c. Control Procedures. The Director of Military Personnel Management (DMPM), ODCSPER, will be the study director. Major Anthony Durso or Major James Maloney, DAPE-MPD-PO, telephone 697-2403/2556, will be the HQDA Points of Contact for the study.

d. Action Documents. A final report will be prepared. In accordance with AR 5-5 the study sponsor will provide a written evaluation of this report. Documentation will be provided in the form of a "User Manual" for any models developed and/or modified. Necessary DD Form 1498 reports will be prepared by the study agency and forwarded to ODCSPER, ATTN: DAPE-MPD-PO for distribution.

e. Coordination. This tasking directive has been coordinated with CAA in accordance with paragraph 4, AR 10-38.

FOR THE DEPUTY CHIEF OF STAFF PERSONNEL:

BOBBY B. PORTER
Major General, GS
Director of Military
Personnel Management

4

APPENDIX C

BIBLIOGRAPHY

DEPARTMENT OF THE ARMY

Department of the Army (DA) Publications

MILPERCEN Officer Force Implementation Plan (OFIP), FY 83-89 (President's Budget) 24 March 1983

Women in the Army Policy Review, Office of the Deputy Chief of Staff for Personnel, 12 November 1982

Mobilization Personnel Processing System (MOBPERS), Information Handbook, MILPERCEN and RCPAC, October 1982

US Army Concepts Analysis Agency (CAA)

Total Army Analysis FY 84-88 (TAA-88) Appendix L, TAA-88 Design Case Casualty Stratification Study Report, CAA-SR-82-9, October 1982

Officer Dual Specialty Allocation System (ODSAS), CAA-SR-76-6, April 1976

MISCELLANEOUS

Functional Description for the US Army Officer Strength and Personnel Management Data Forecasting System (FORECAST), General Electric Company, 31 January 1982

Title 10, United States Public Code

APPENDIX D

MODEL DESIGN DATA

This appendix contains tabular data pertaining to the model revisions for OASYS.

Section I. COMPUTATION OF ROTATION EQUITY (ROTEQ) SET-ASIDE

The following example depicts the steps required to compute the CARPRO Set-Aside:

Given:

Area	TAADS spaces			Average tour length (months)
	Total	Male-only	Inter-changeable	
CONUS	200	40	160	24
Long	25	15	10	36
Short	50	45	5	12
Total	275	100	175	

The following formula is used to calculate the ROTEQ set-aside:

$$\frac{C_{mo} + C_{sa}}{T_c} = \frac{L_{mo}}{T_l} + \frac{S_{mo}}{T_s}$$

where:

T_c, T_l, T_s is the average tour length in months in CONUS or OCONUS (long or short tour area).

C_{mo} is the number of CONUS spaces coded male-only (P1) in TAADS

L_{mo}, S_{mo} is the number of OCONUS male-only spaces requiring corresponding CONUS spaces to provide rotational equity

C_{sa} is the number of CONUS spaces to be set aside to provide rotation equity for officers serving in male-only spaces OCONUS

Rearranging terms to calculate the male authorizations set aside in CONUS:

$$C_{sa} = T_c \left(\frac{L_{mo}}{T_l} + \frac{S_{mo}}{T_s} \right) - C_{mo}$$

Set Tc equal to 24 and solve the equation for the CONUS male-only set aside, C_{sa}:

$$C_{sa} = 24 \times \left(\frac{15}{36} + \frac{45}{12} \right) - 40$$

$$C_{sa} = 100 - 40 = 60 \text{ spaces}$$

NOTE: When $C_{sa} \leq 0$, average CONUS tour length exceeds 24 months; set C_{sa} equal to zero.

Section II. COMPUTATION OF CAREER PROGRESSION (CARPRO) SET-ASIDE

The following computations exemplify the steps of the CARPRO algorithm. The same steps would apply to the ranks of colonel and lieutenent colonel, but they have been omitted for brevity.

STEP 1: Listed below are the data required to compute CARPRO; these include TAADS authorizations, the male-only spaces (coded P1), and the previously computed set-asides for rotation and casualty replacement. Select the larger of the two set-asides and add the larger set-aside to the male-only in the righthand column below.

	Total TAADS author-izations	Male-only auth (MO)	Set-asides (SA)		Larger set-aside	Sum of MO and larger SA
			ROTEQ	CASREP		
MAJ	90	10	15	7	15	25
CPT	180	110	3	10	10	120
LT	120	40	20	9	20	60

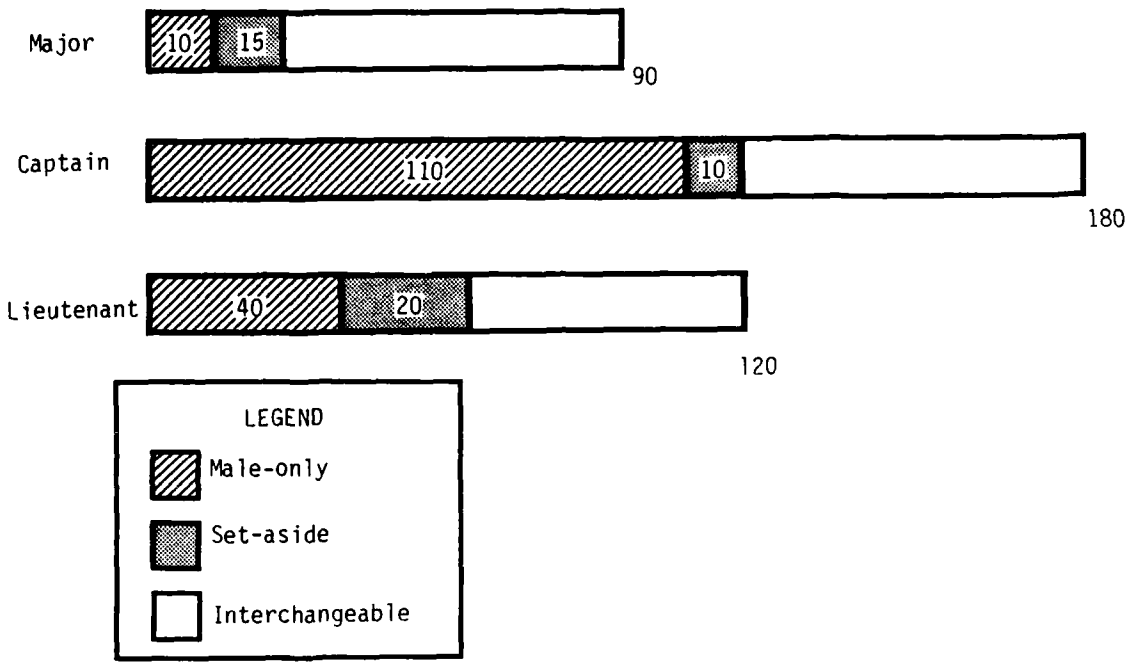


Figure D-1. Example Grade Structure For CARPRO Computation

STEP 2: Compute the ratio (R) of the Sum (male-only + larger set-aside) to the Total Authorizations, and note the largest ratio (R_{max}).

	Total authorizations	Sum = male-only + larger set-aside	Ratio(R)
MAJ	90	25	0.278
CPT	180	120	0.667 (R_{max})
LT	120	60	0.500

STEP 3: Multiply the maximum ratio (R_{max}) times the Total Authorizations to get Total Male. Then subtract male-only from Total Male to obtain the CARPRO set aside.

STEP 4: Subtract the Total Male-only from the Total Authorization to obtain the remaining interchangeables. The results are summarized in tabular form on the next page.

SUMMARY

	Total male = R_{max} x authorization		Male-only auth		CARPRO[b] set-aside	Total[c] male = male-only + set-aside	Interchangeable (total auth[d] minus total male)
MAJ	(0.667)[a] x (90)	-	10	=	50	60	30
CPT	(0.667)[a] x (180)	-	110	=	10	120	60
LT	(0.667)[a] x (120)	-	40	=	40	80	40

[a]The percentage of both male-only spaces and interchangeable spaces is constant for all ranks.

[b]CARPRO ≥ either ROTEQ or CASREP.

[c]The Total Male requirements are the sum of male-only and the CARPRO set-aside.

[d]Refer to Step 2.

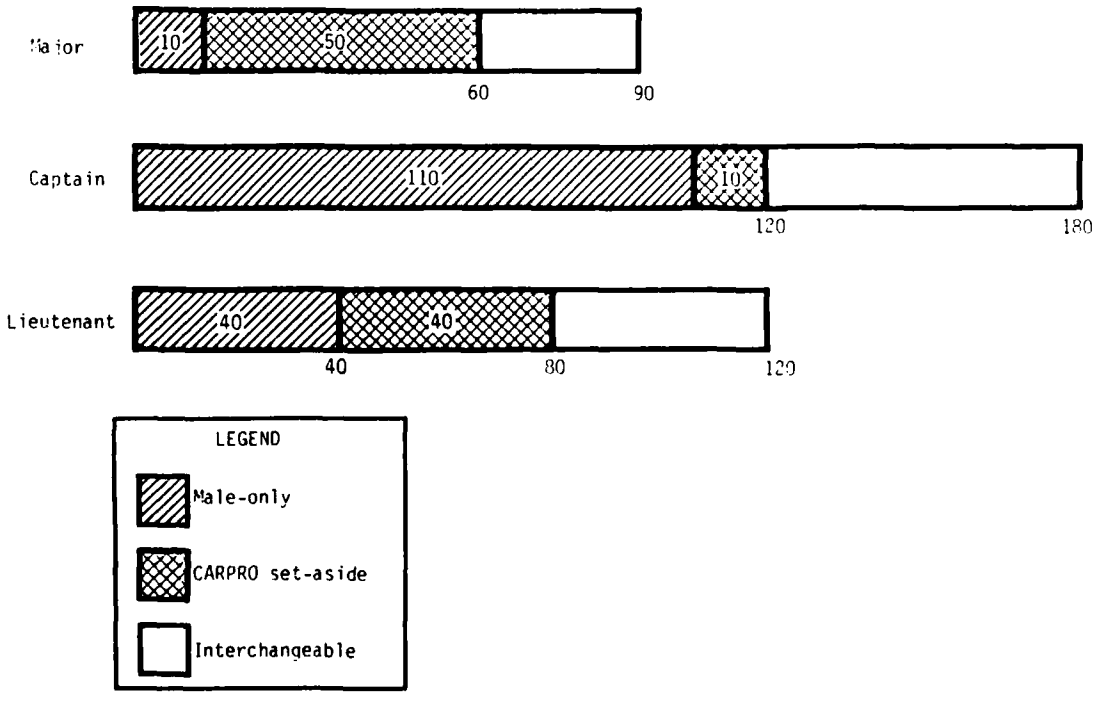
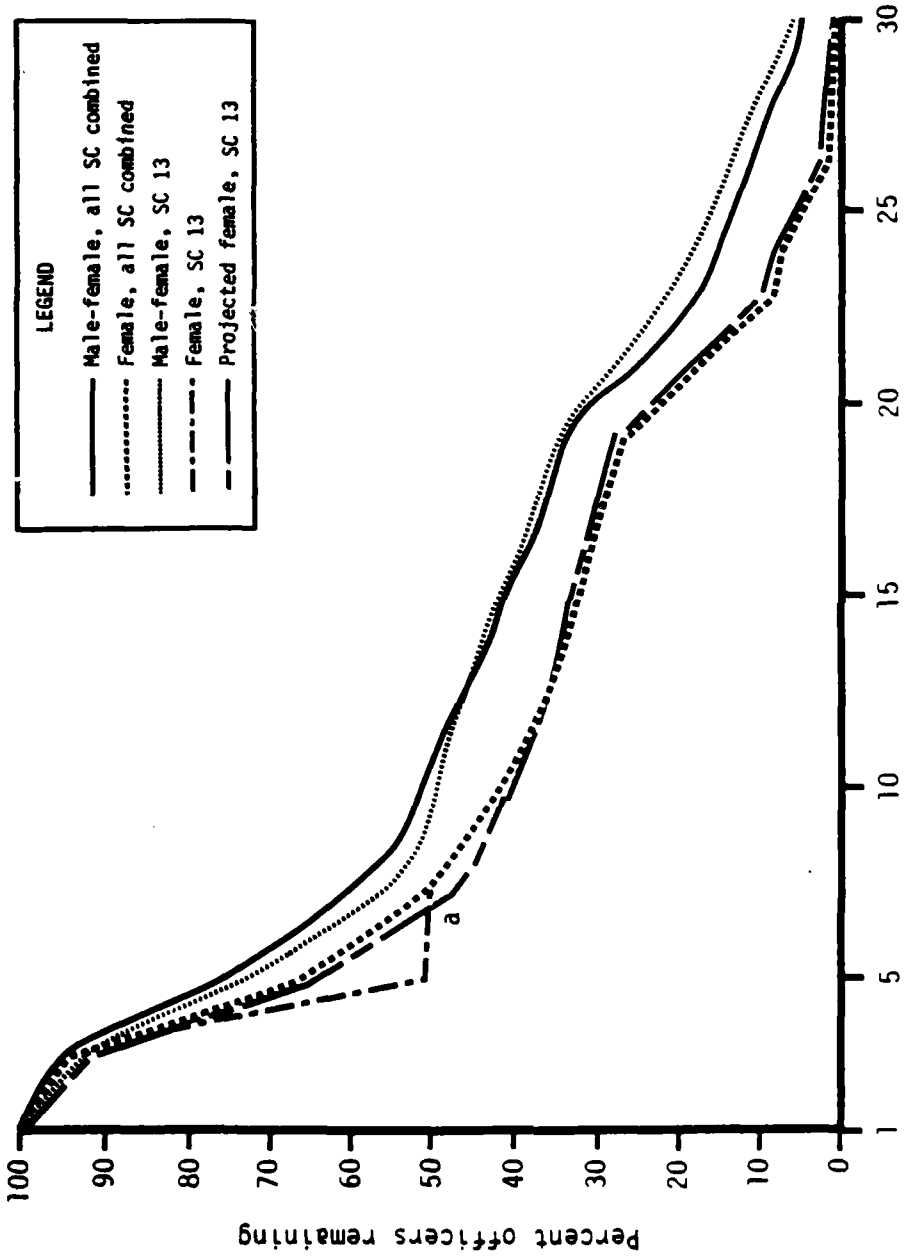


Figure D-2. Resultant Male-only and Interchangeable Spaces

APPENDIX E

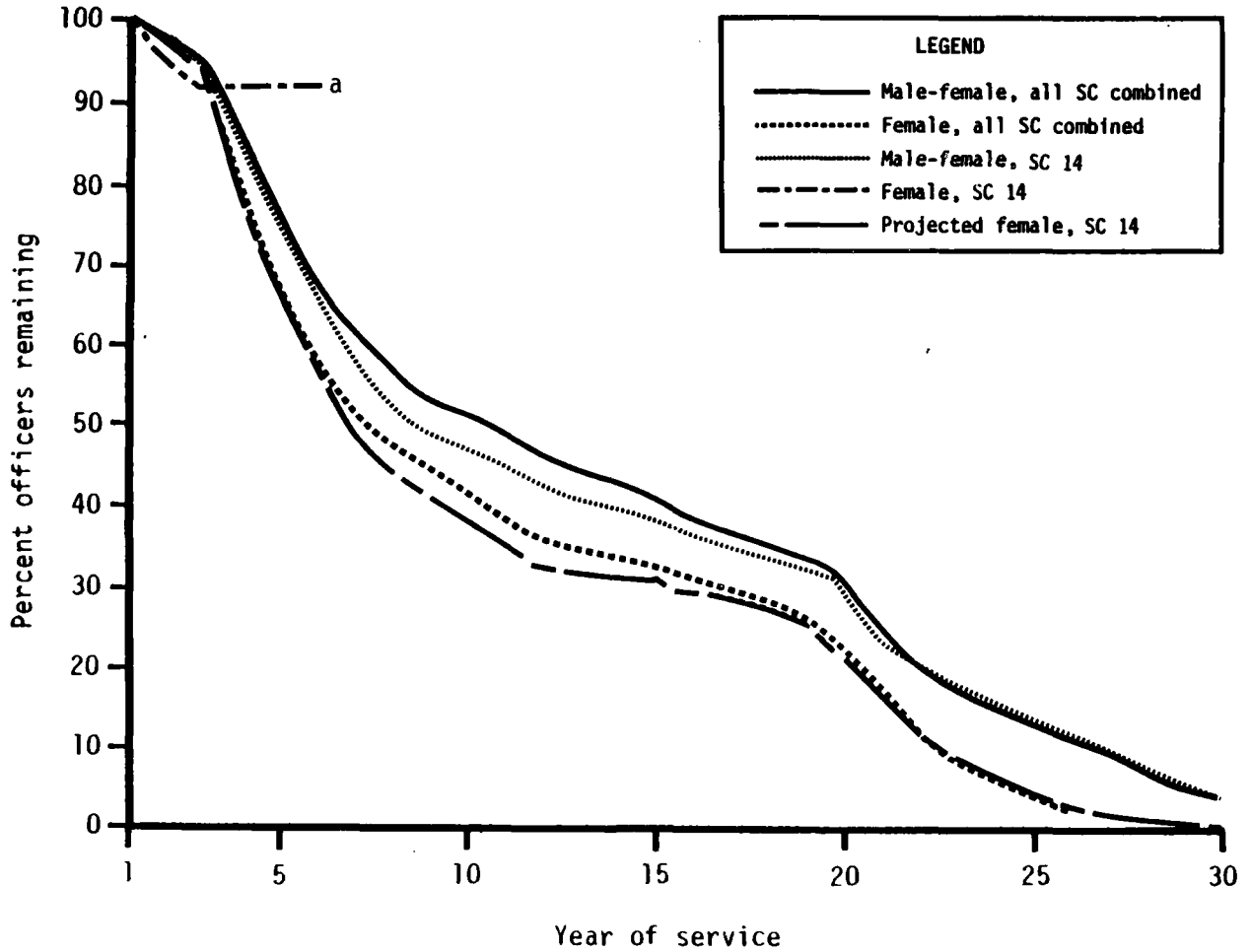
SURVIVABILITY CURVES

This appendix contains survivability curves for each specialty code.



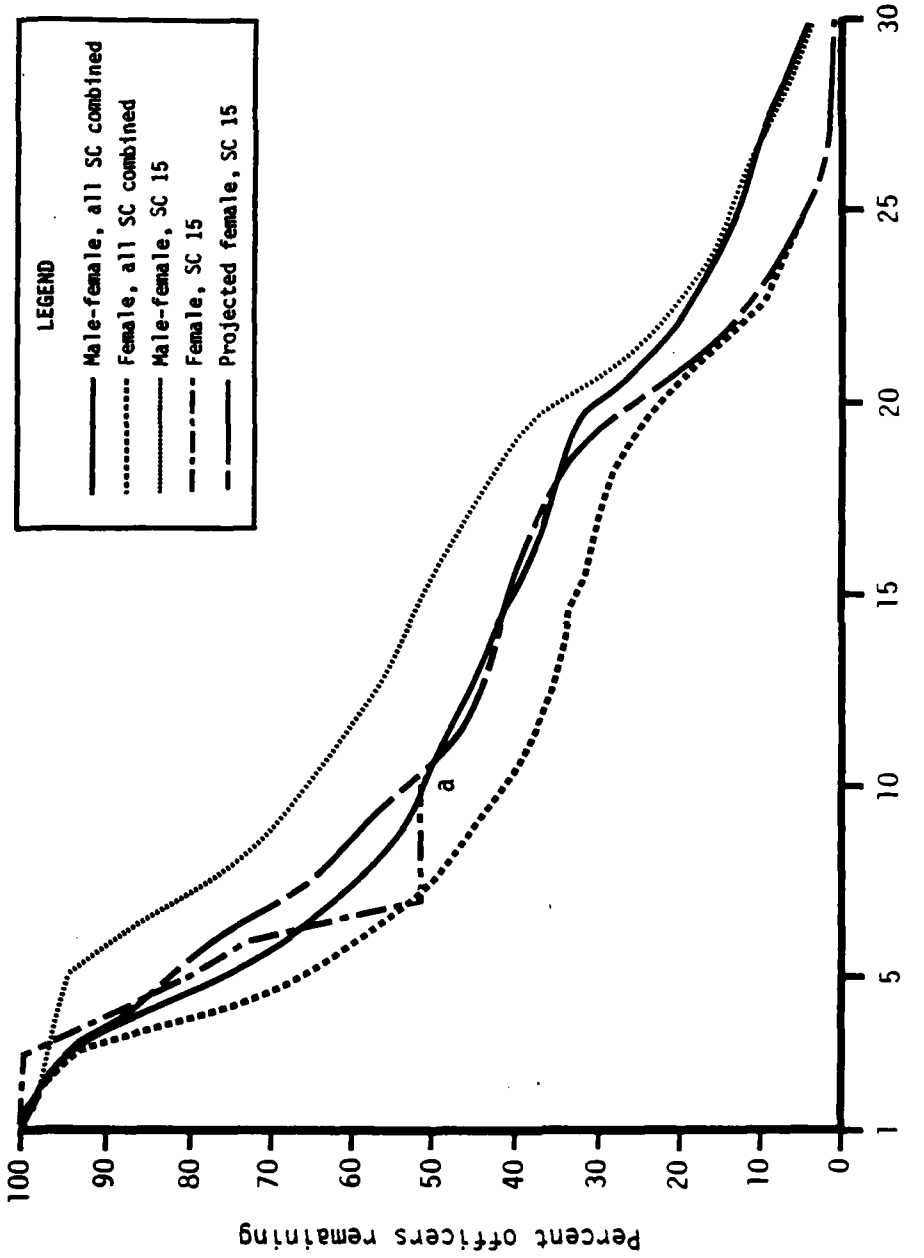
[a]Data incomplete for outyears.

Figure E-1. Survivability Curve, SC 13 - Field Artillery



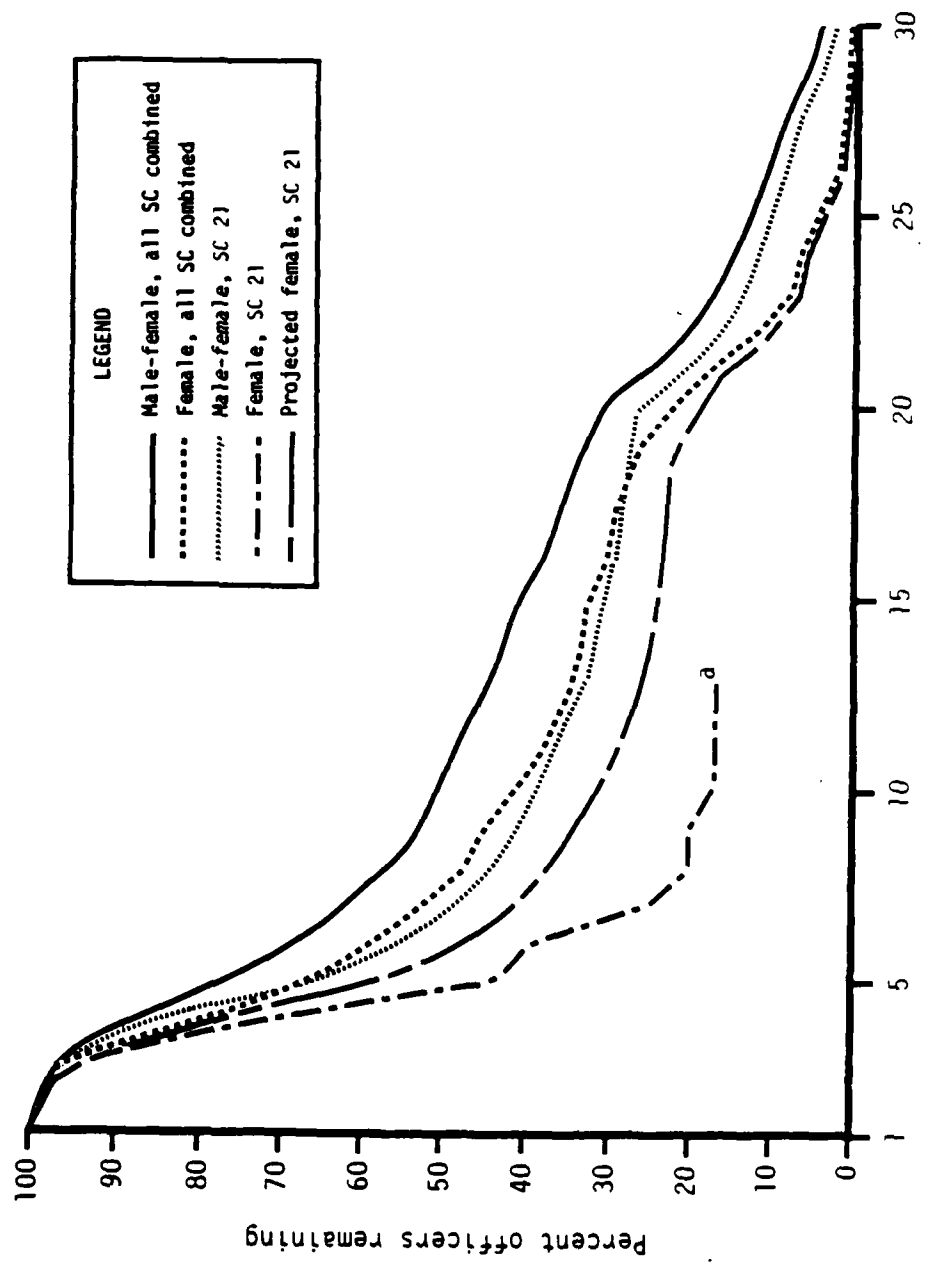
[a]Data incomplete for outyears.

Figure E-2. Survivability Curve, SC 14 - Air Defense Artillery



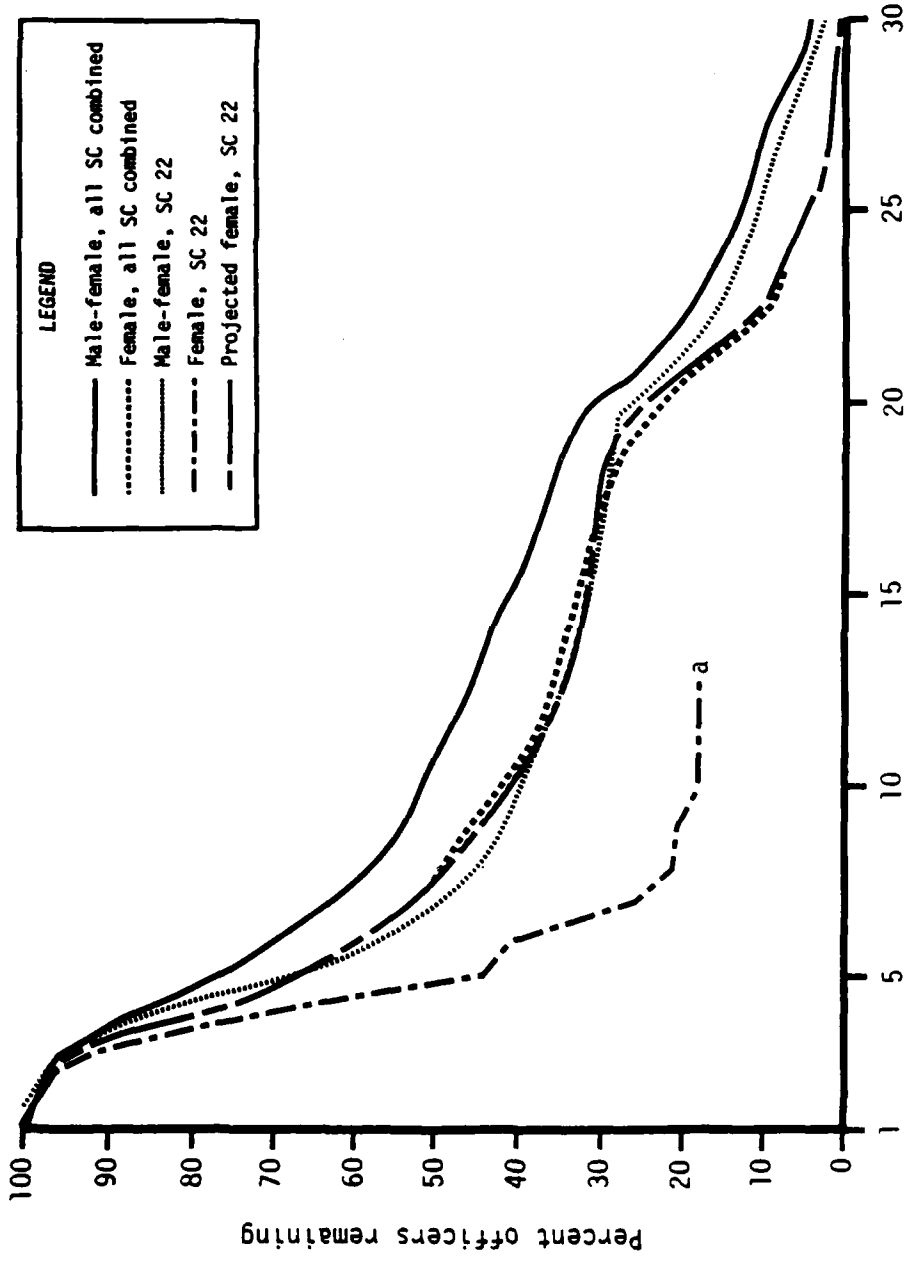
[a]Data incomplete for outyears.

Figure E-3. Survivability Curve, SC 15 - Aviation



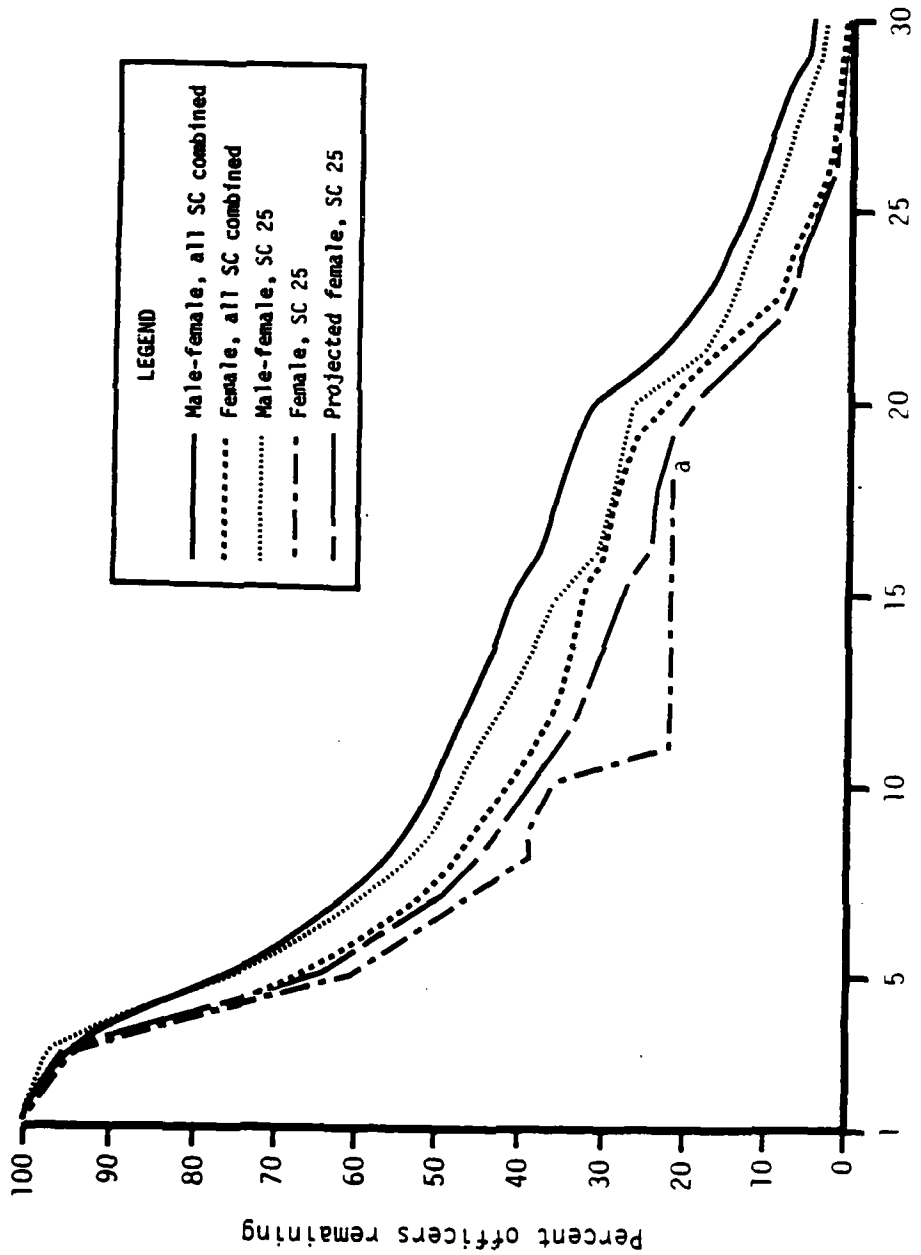
[a]Data incomplete for outyears.

Figure E-4. Survivability Curve, SC 21 - Engineer



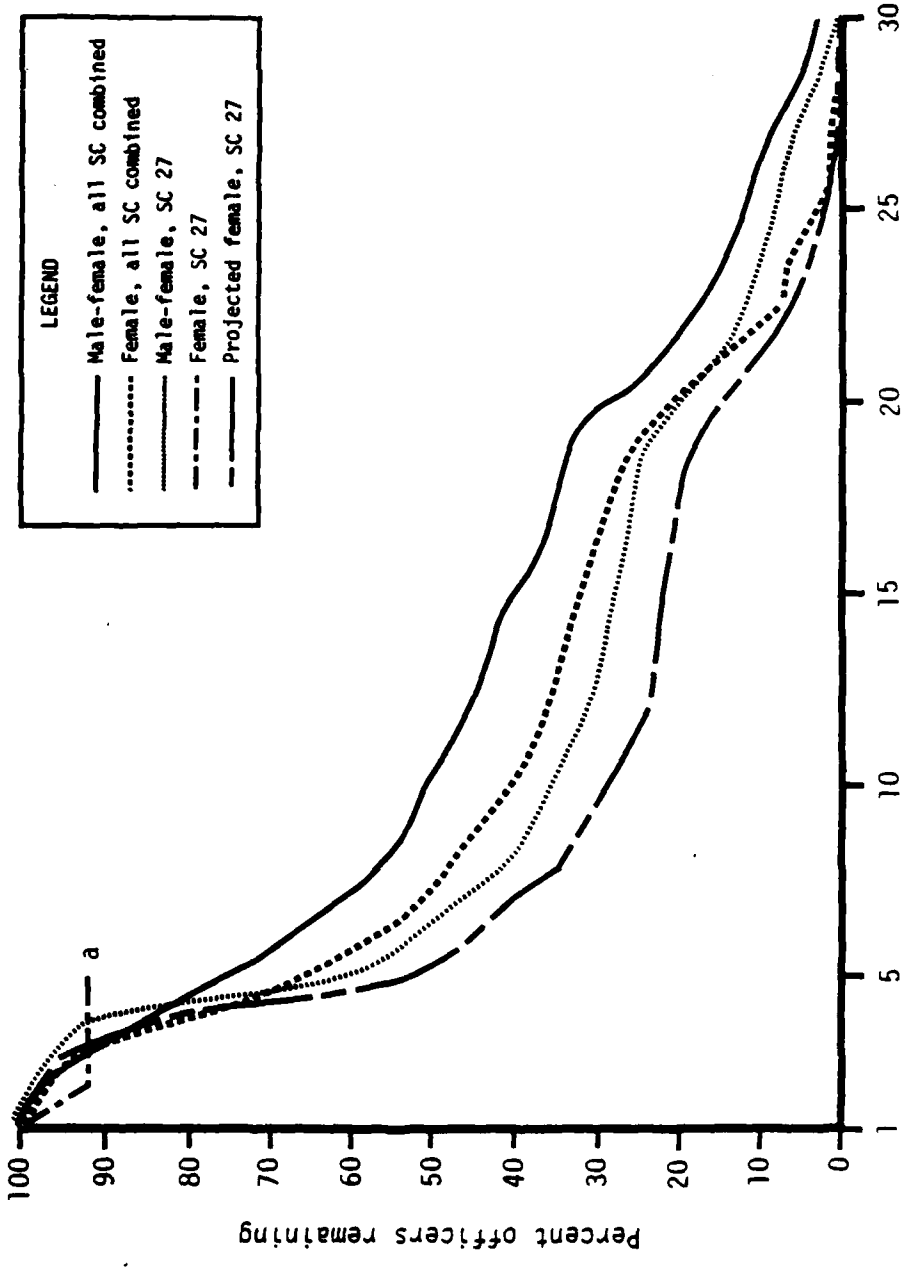
[a]Data incomplete for outyears.

Figure E-5. Survivability Curve, SC 22 - Topographic Engineer



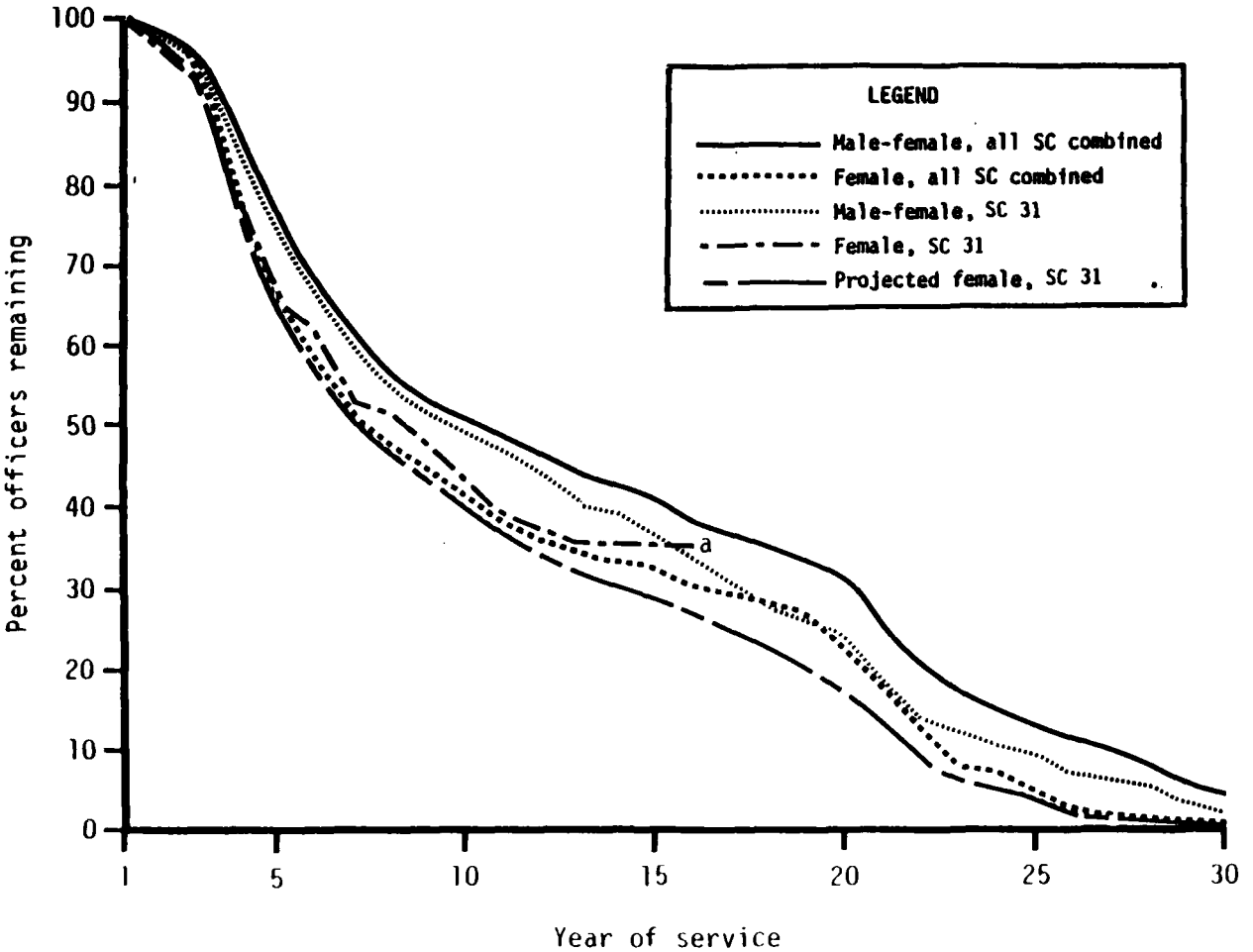
[a]Data incomplete for outyears.

Figure E-6. Survivability Curve, SC 25 - Communications-Electronics



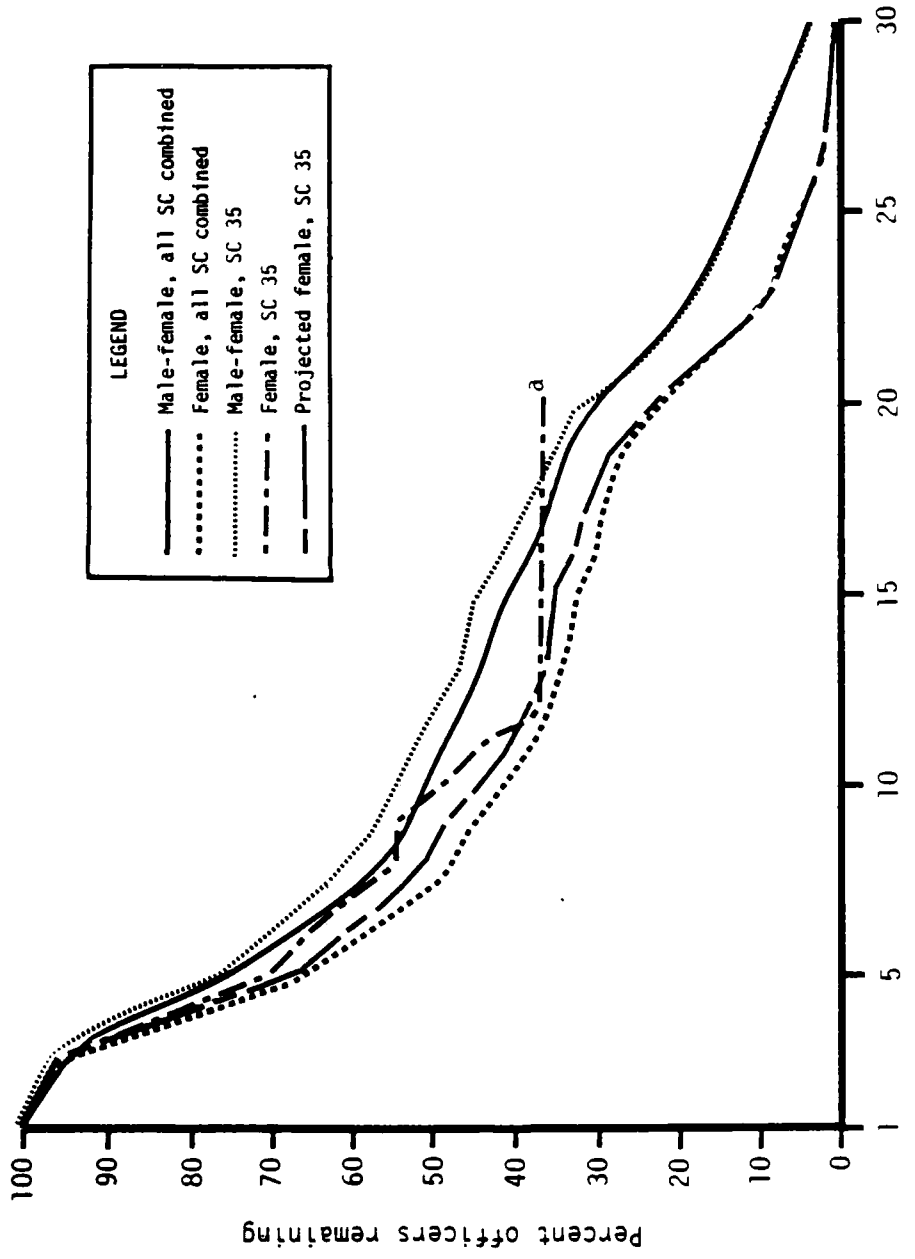
[a]Data incomplete for outyears.

Figure E-7. Survivability Curve, SC 27 - Communications-Electronics Engineering



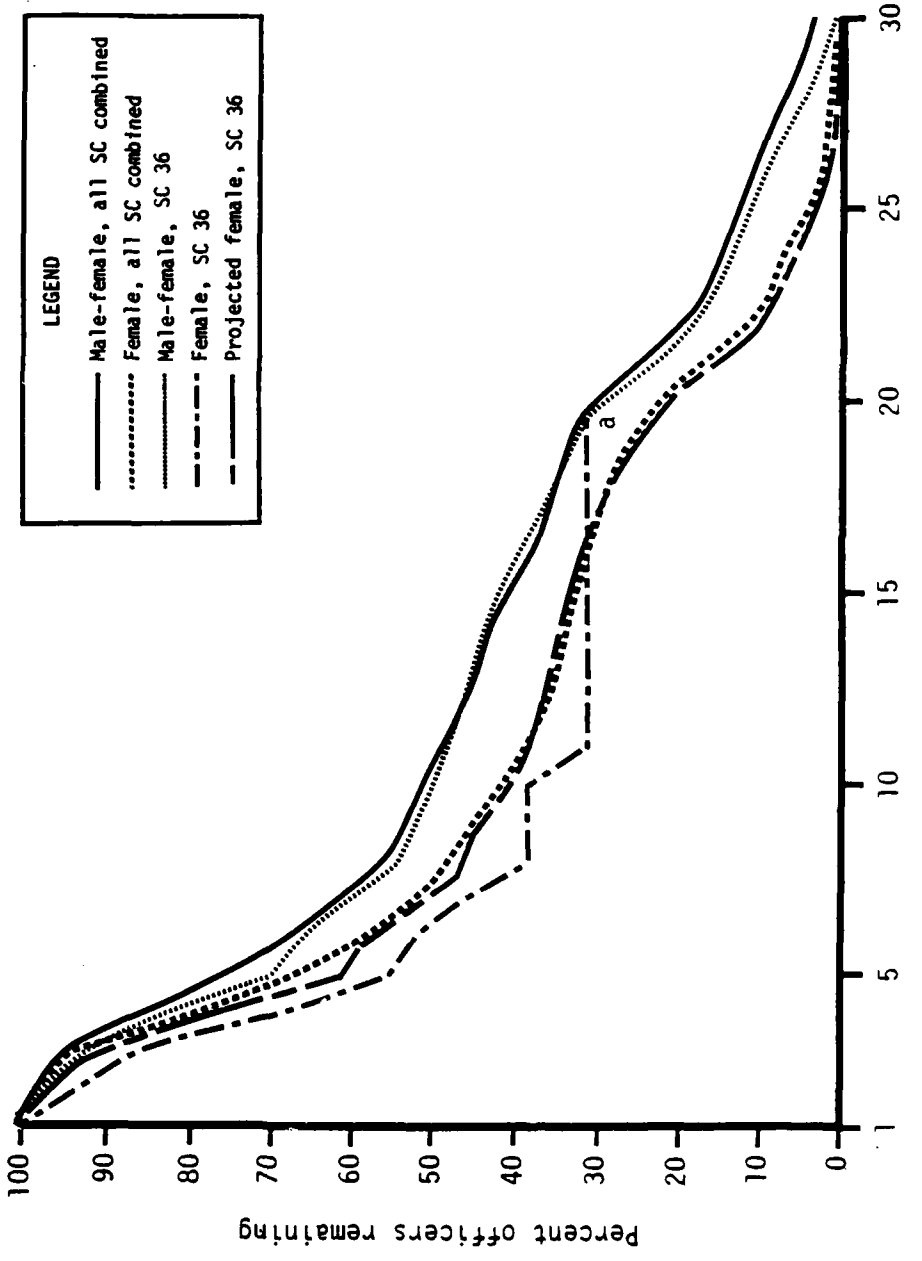
[a]Data incomplete for outyears.

Figure E-8. Survivability Curve, SC 31 - Military Police



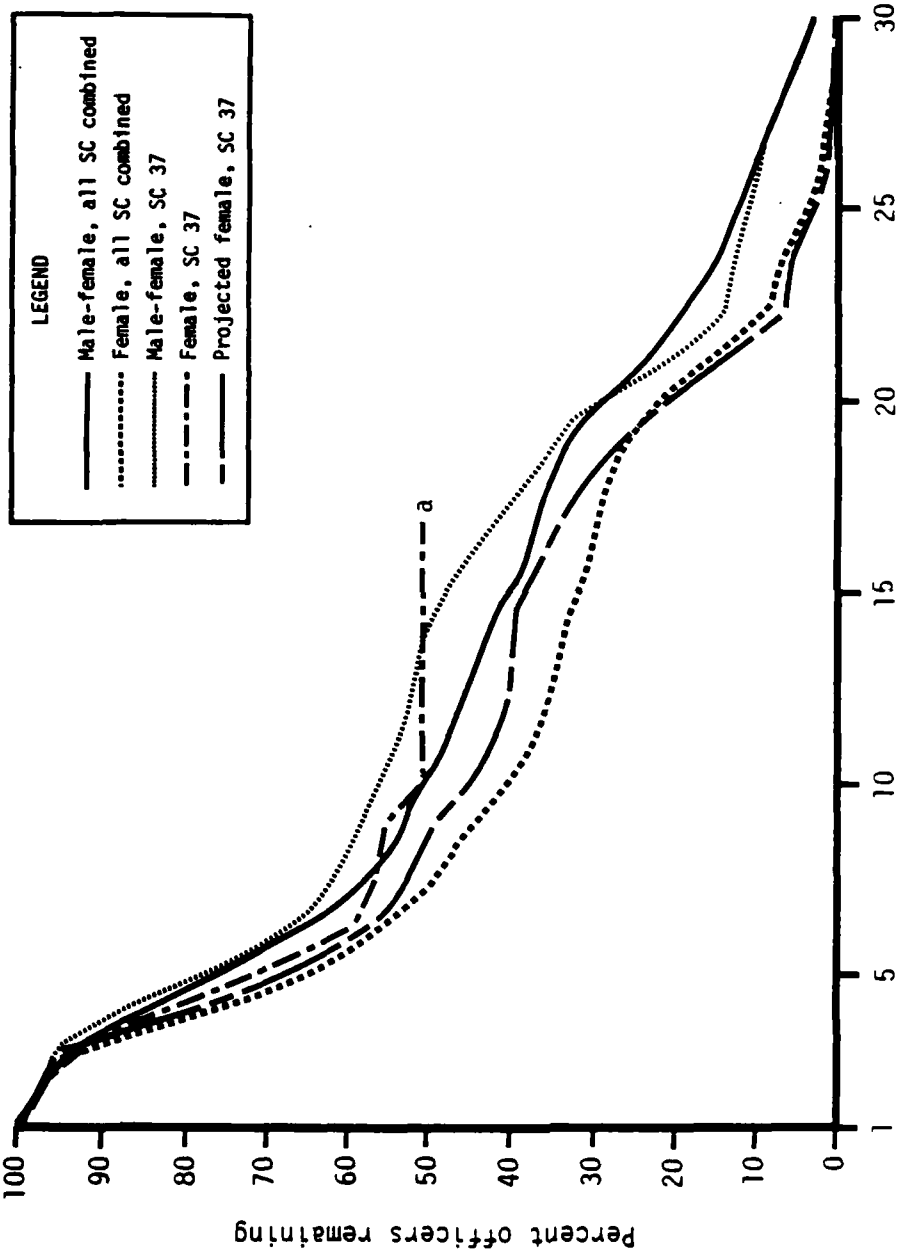
[a]Data incomplete for outyears.

Figure E-9. Survivability Curve, SC 35 - Military Intelligence



[a]Data incomplete for outyears.

Figure E-10. Survivability Curve, SC 36 - Counterintelligence-Signal Security



[a]Data incomplete for outyears.

Figure E-11. Survivability Curve, SC 37 - Signal Intelligence-Electronic Warfare

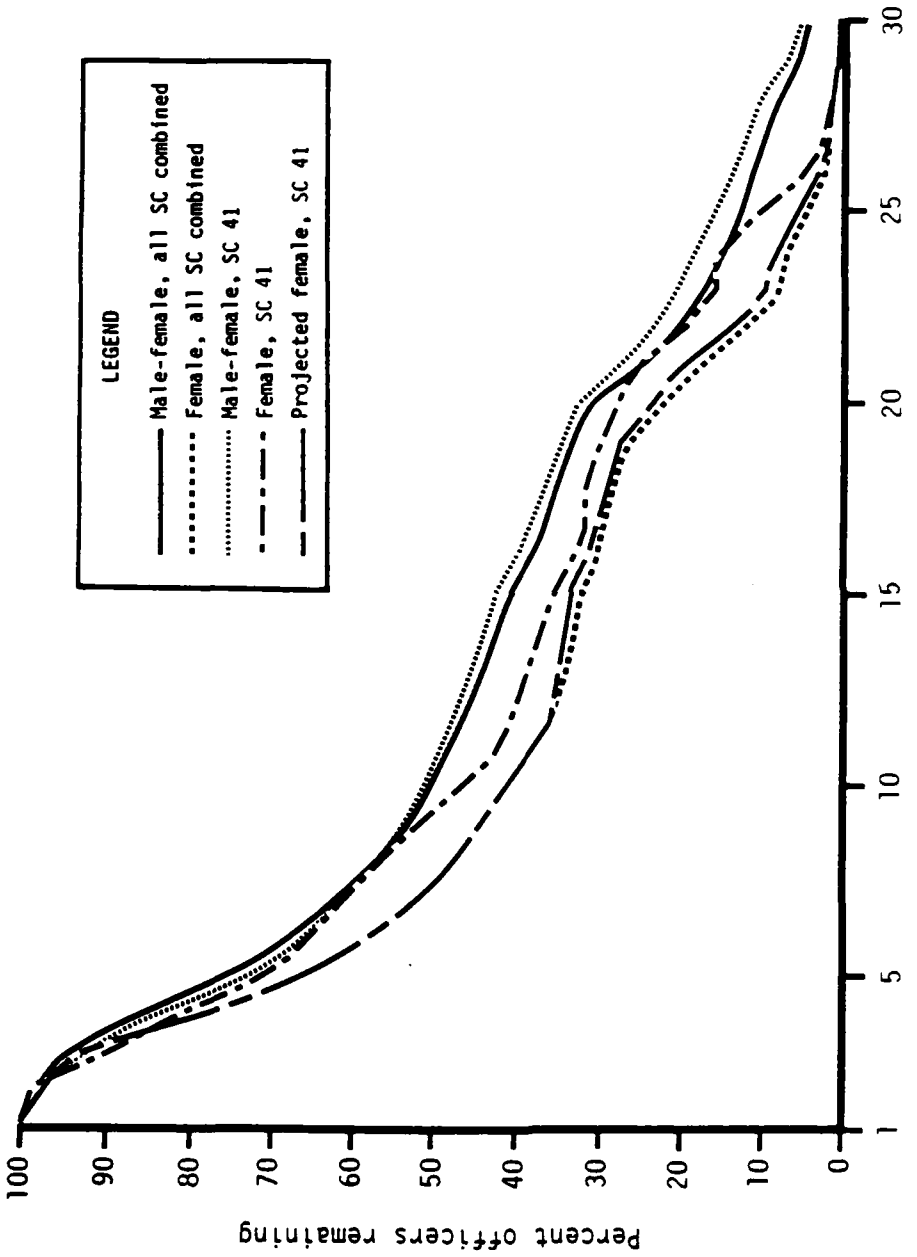


Figure E-12. Survivability Curve, SC 41 - Personnel Programs Management

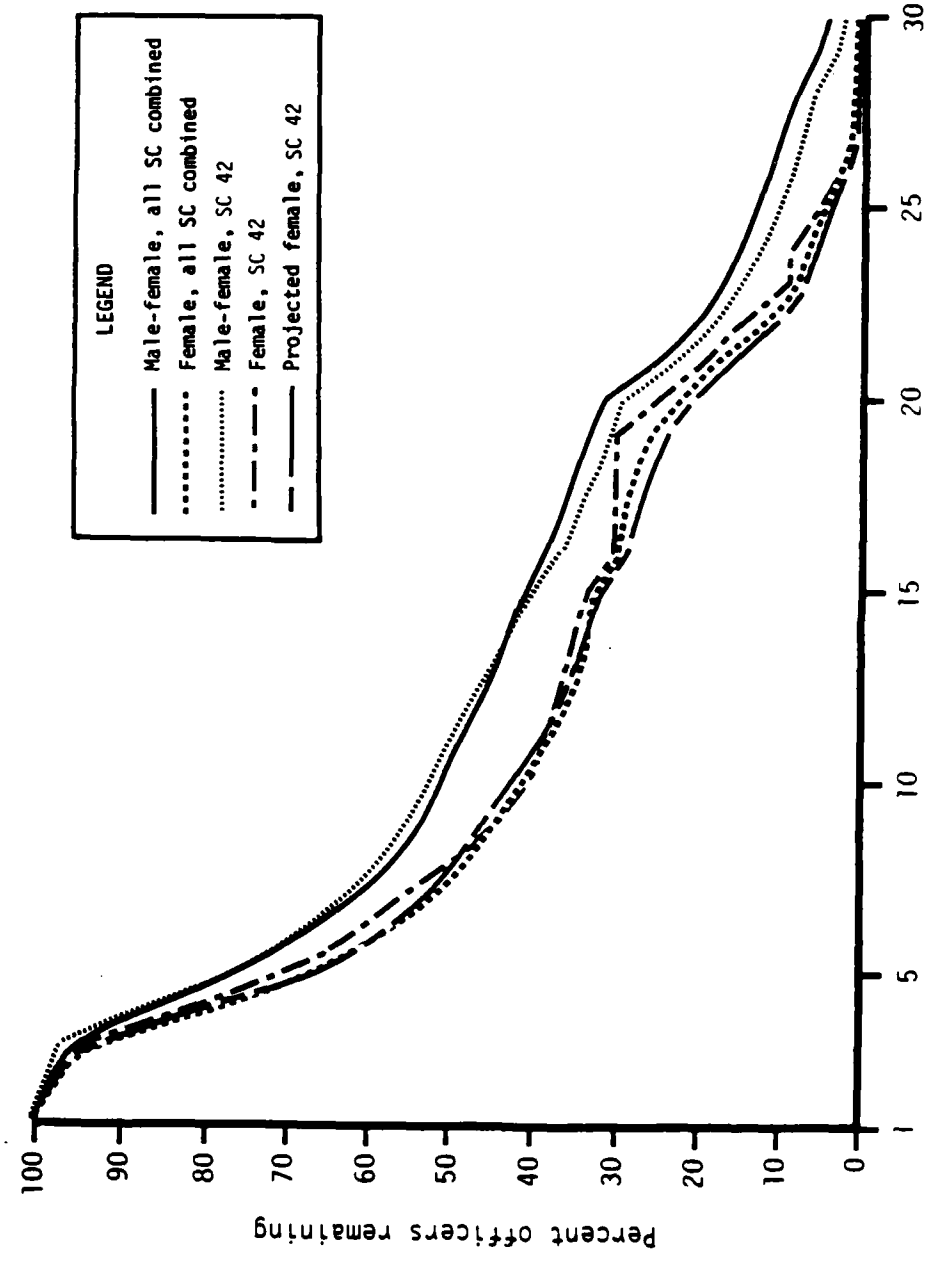
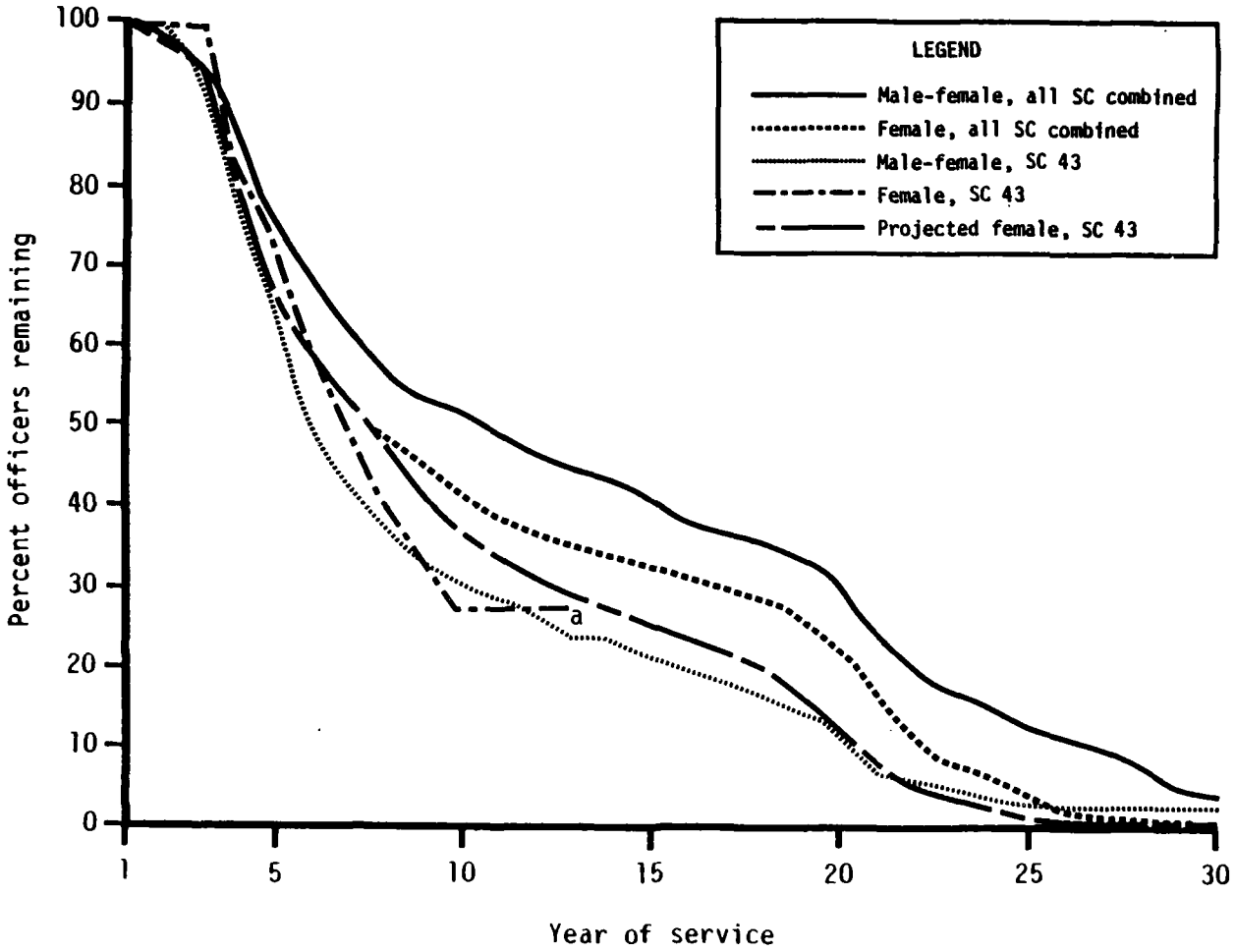
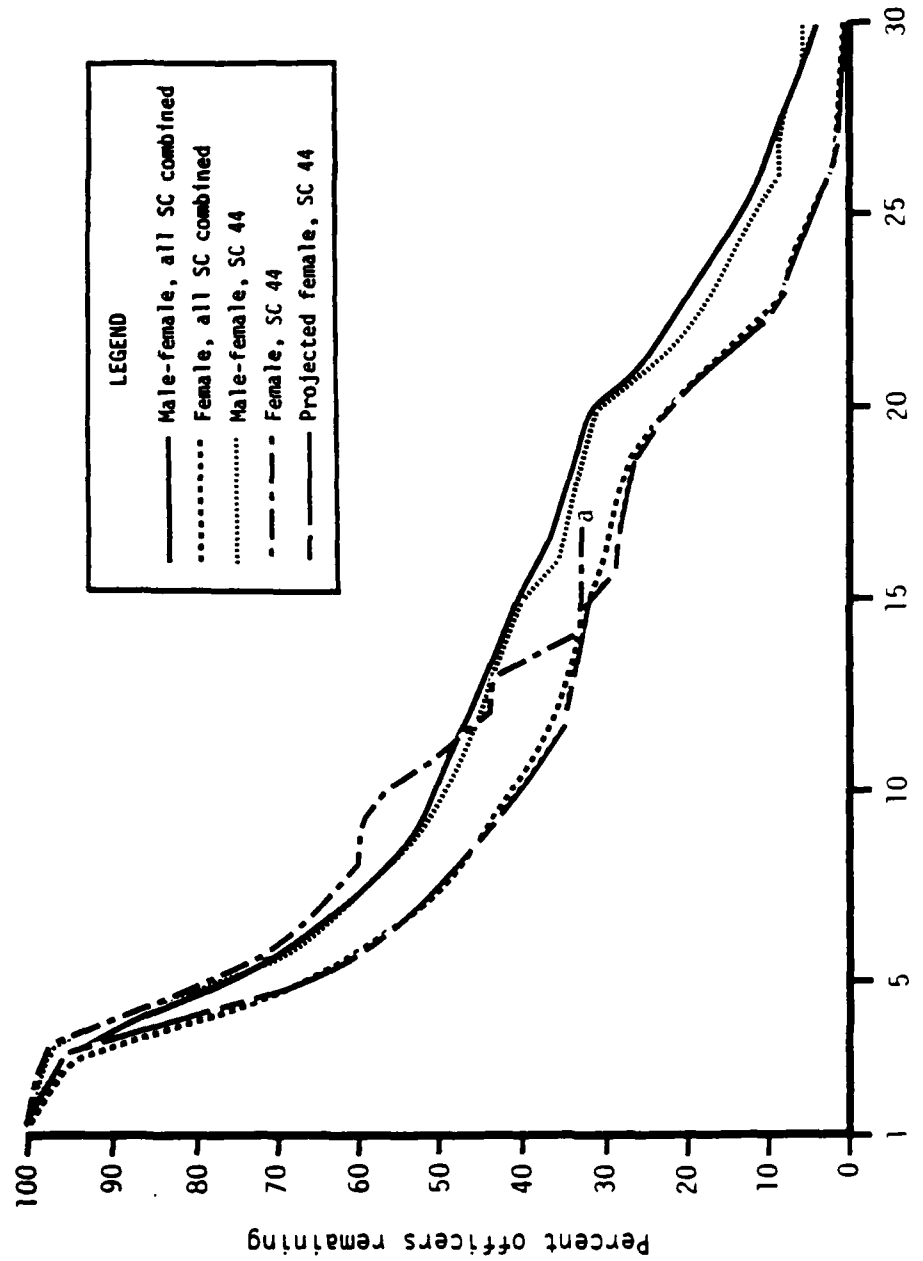


Figure E-13. Survivability Curve, SC 42 - Administrative and Personnel Systems Management



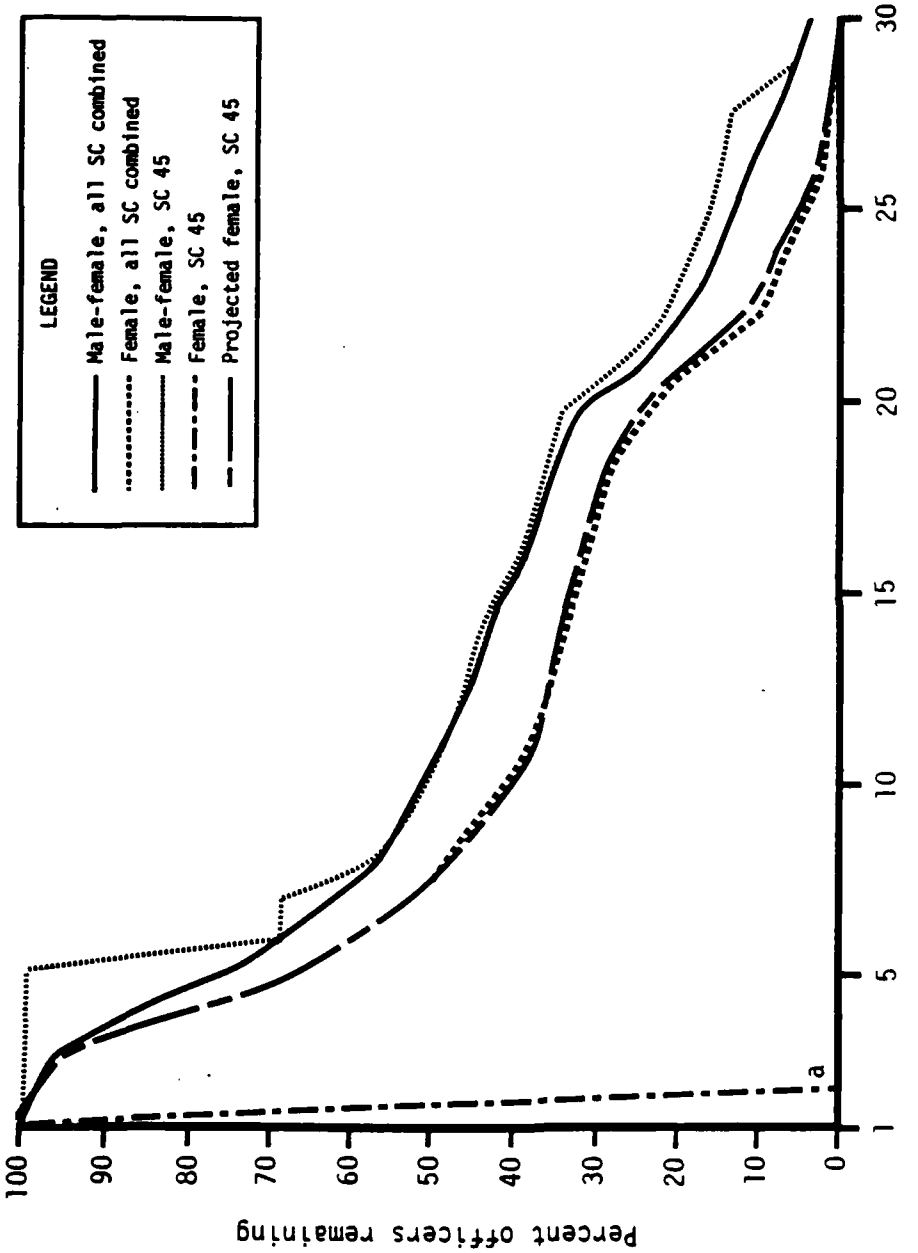
[a]Data incomplete for outyears.

Figure E-14. Survivability Curve, SC 43 - Community Activities Management



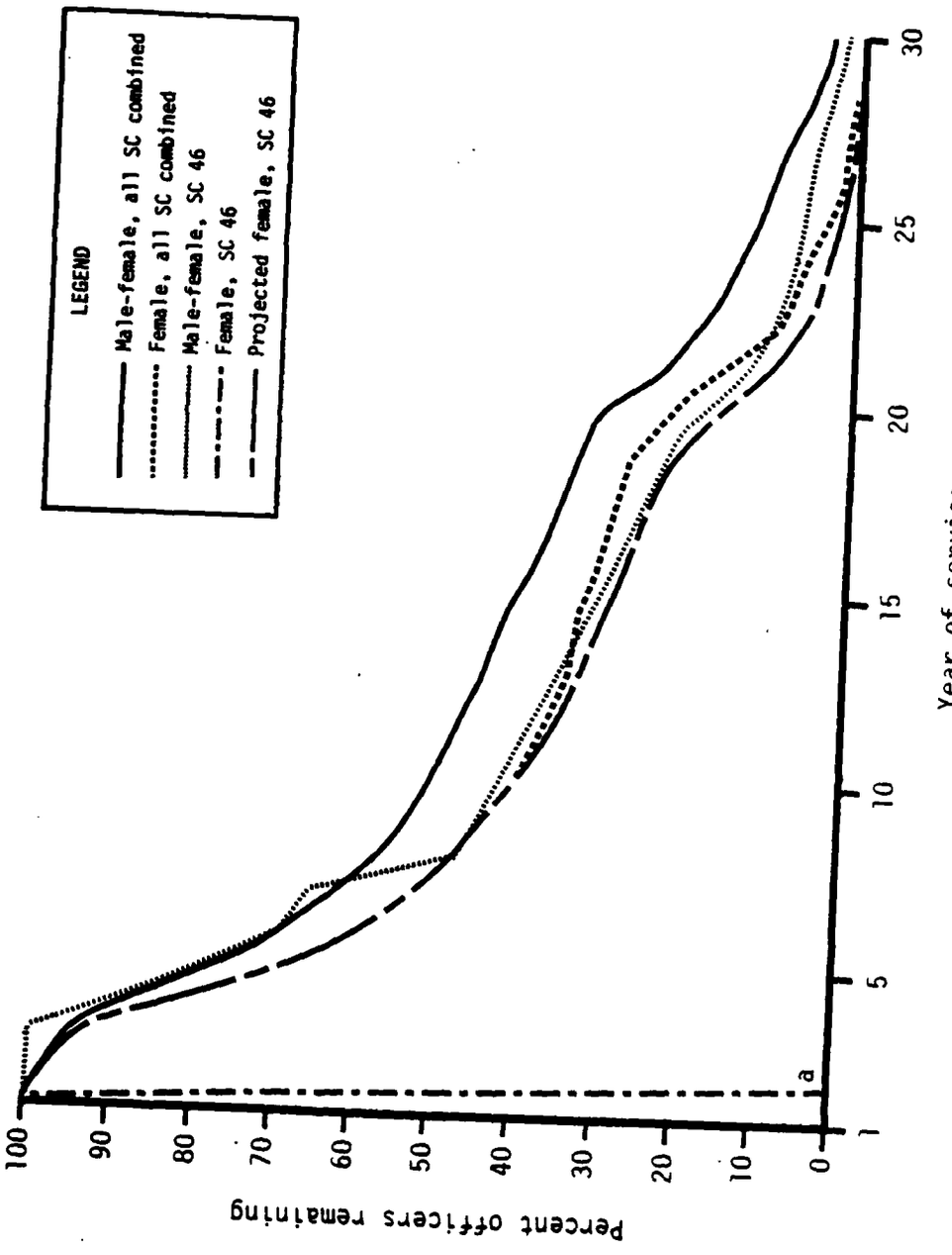
[a]Data incomplete for outyears.

Figure E-15. Survivability Curve, SC 44 - Finance



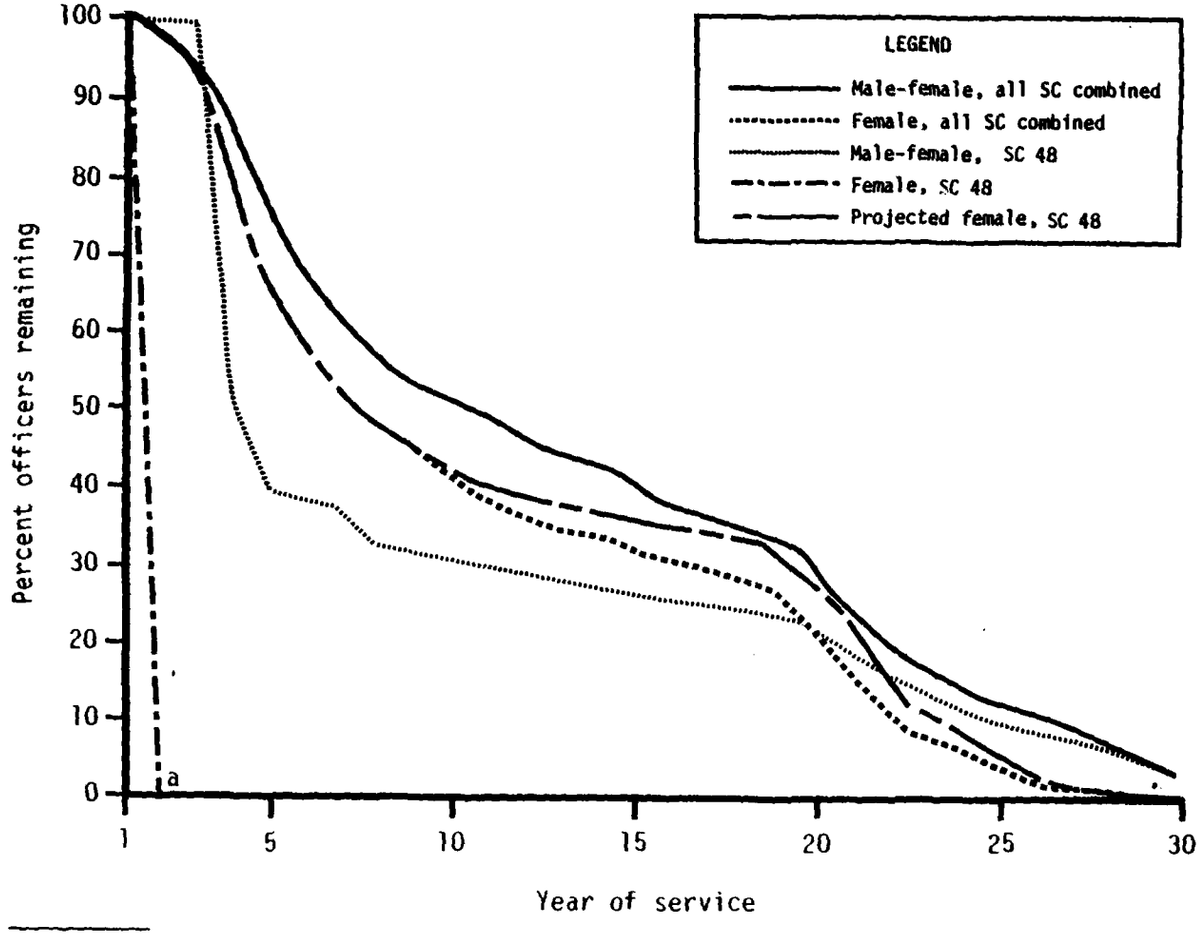
[a]Data incomplete for outyears.

Figure E-16. Survivability Curve, SC 45 - Comptroller



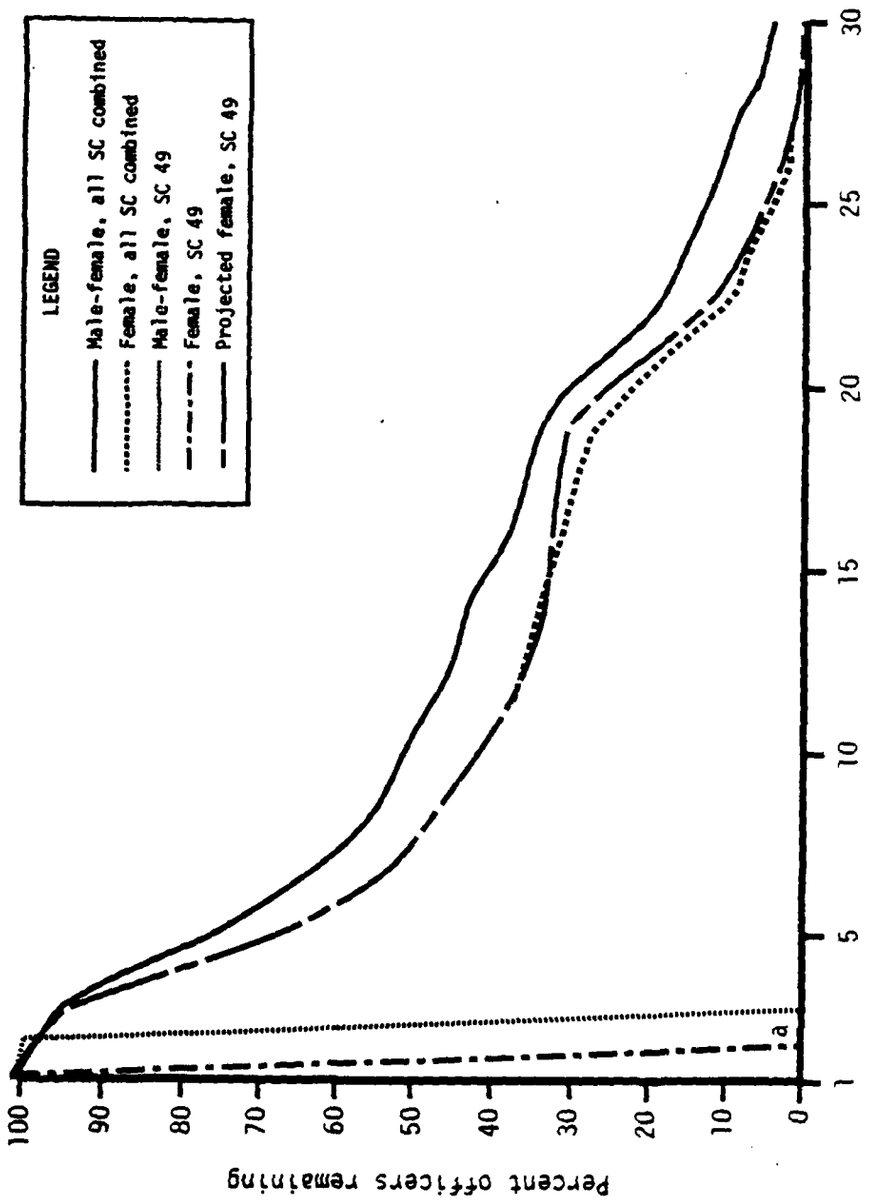
[a]Data incomplete for outyears.

Figure E-17. Survivability Curve, SC 46 - Public Affairs



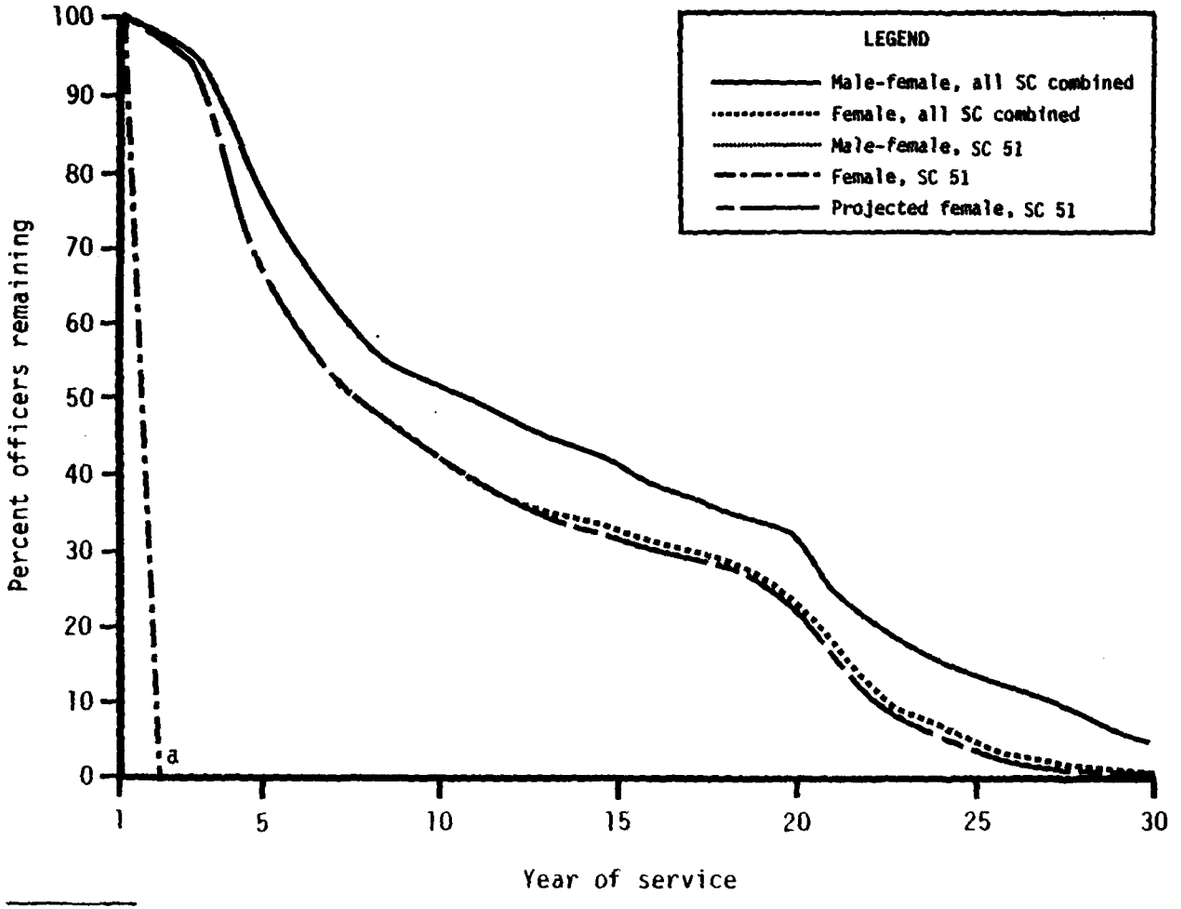
[a]Data incomplete for outyears.

Figure E-18. Survivability Curve, SC 48 - Foreign Area Officer



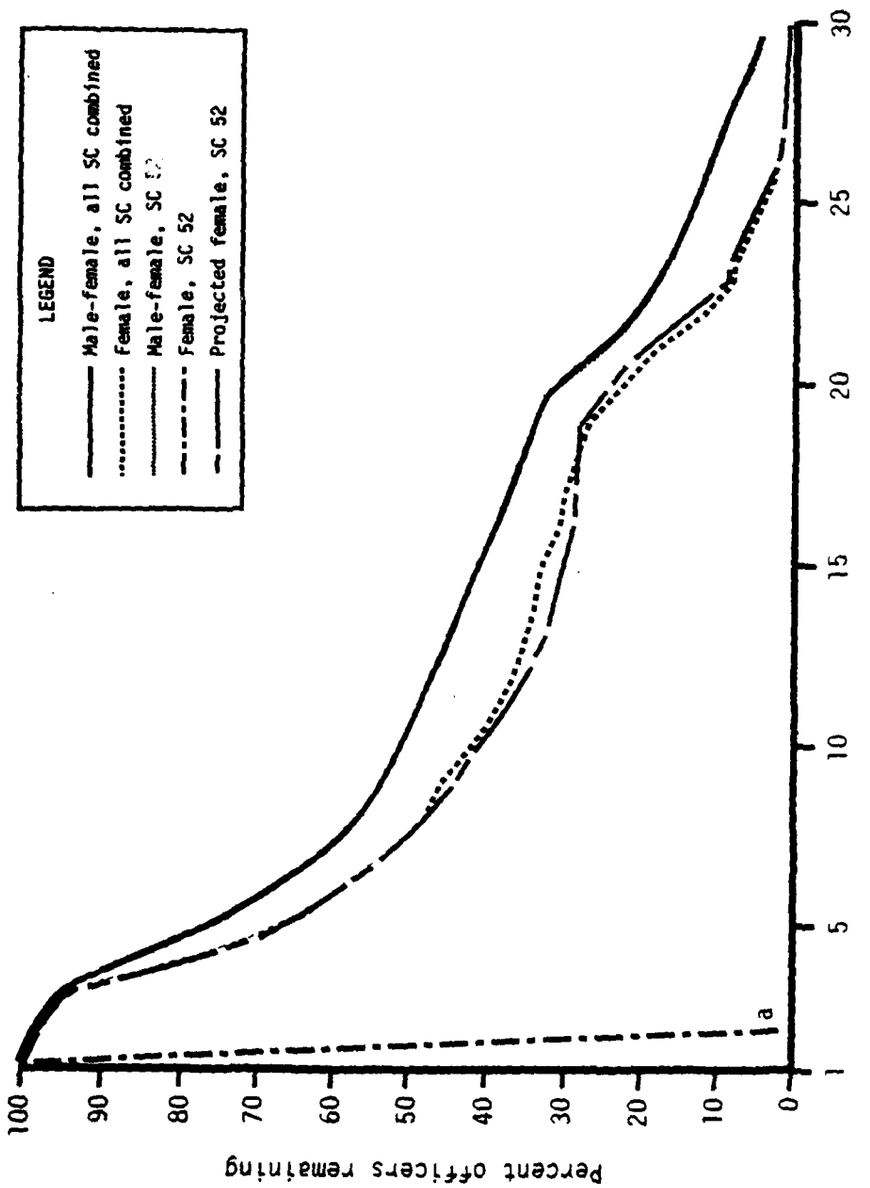
[a]Data incomplete for outyears.

Figure E-19. Survivability Curve, SC 49 - Operations Research/Systems Analysis



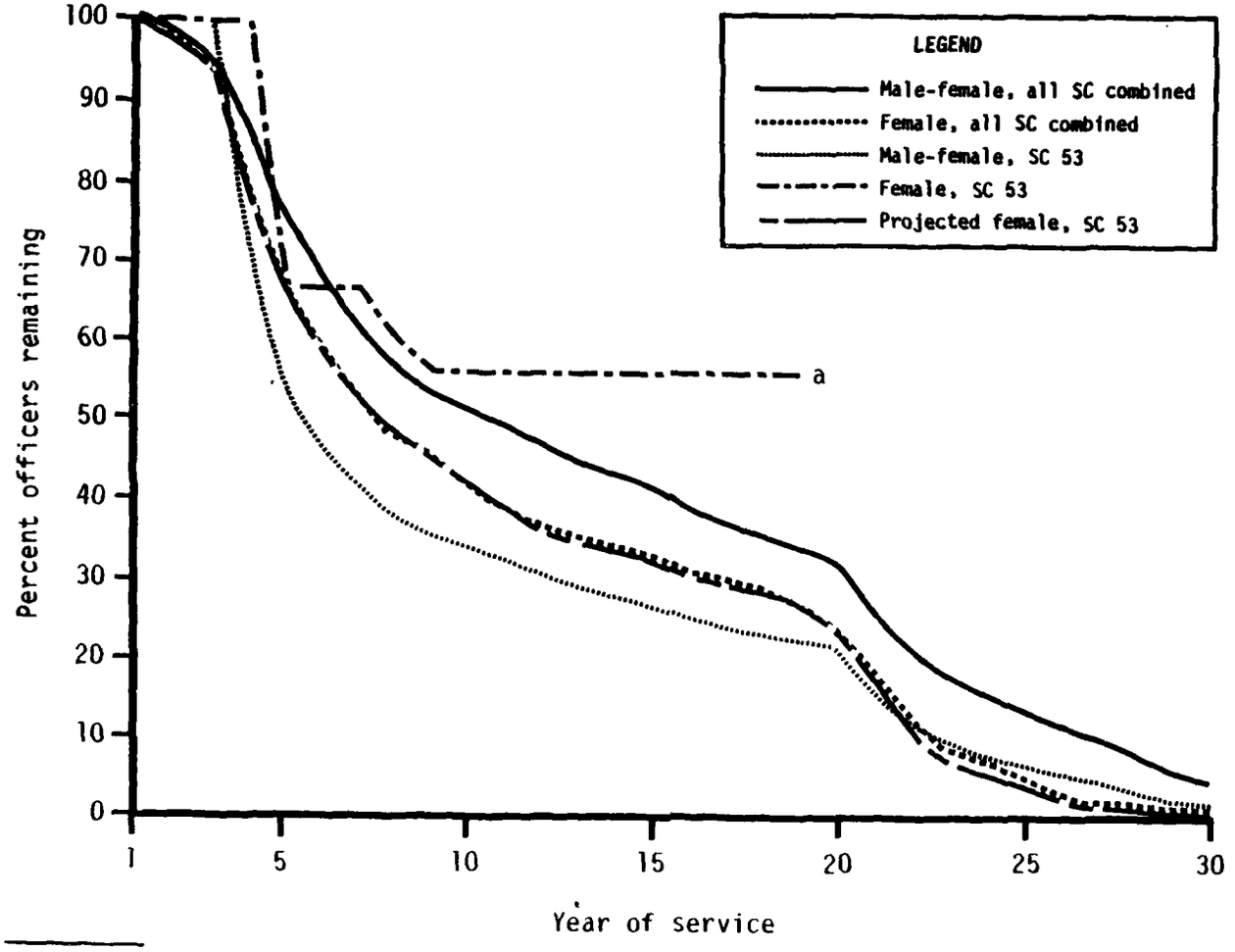
[a]Data incomplete for outyears.

Figure E-20. Survivability Curve, SC 51 - Research and Development



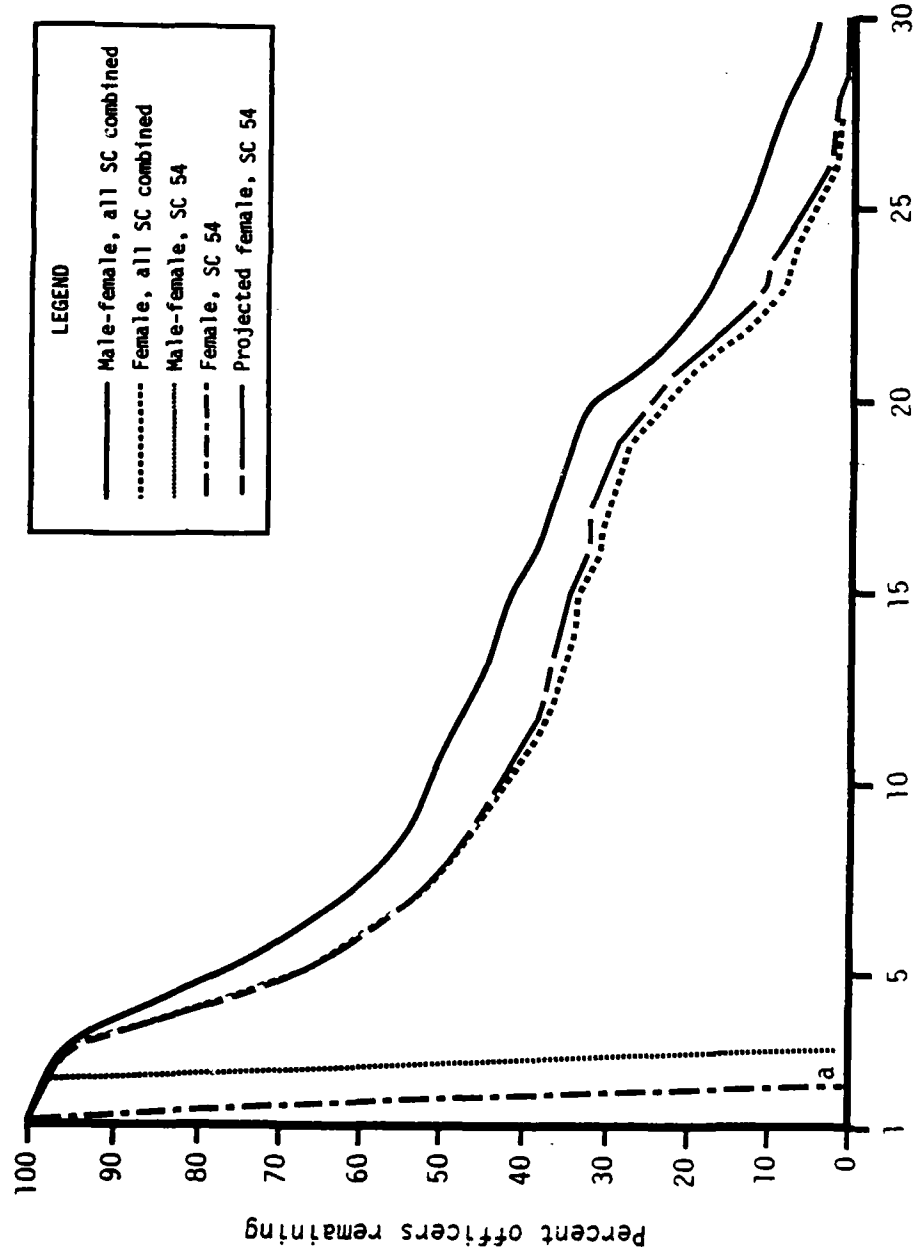
[a]Data incomplete for outyears.

Figure E-21. Survivability Curve, SC 52 - Nuclear Weapons



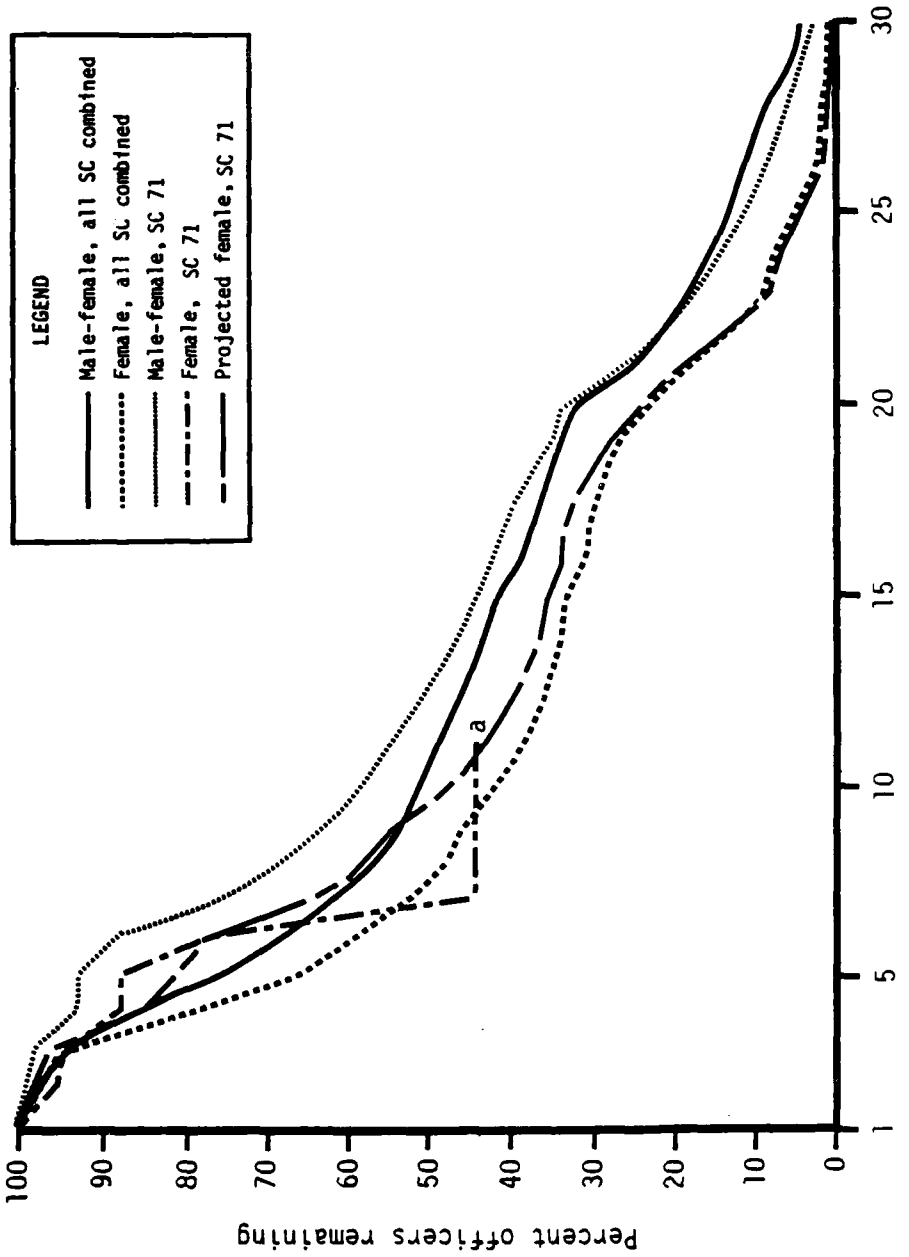
[a]Data incomplete for outyears.

Figure E-22. Survivability Curve, SC 53 - Automated Data Systems Management



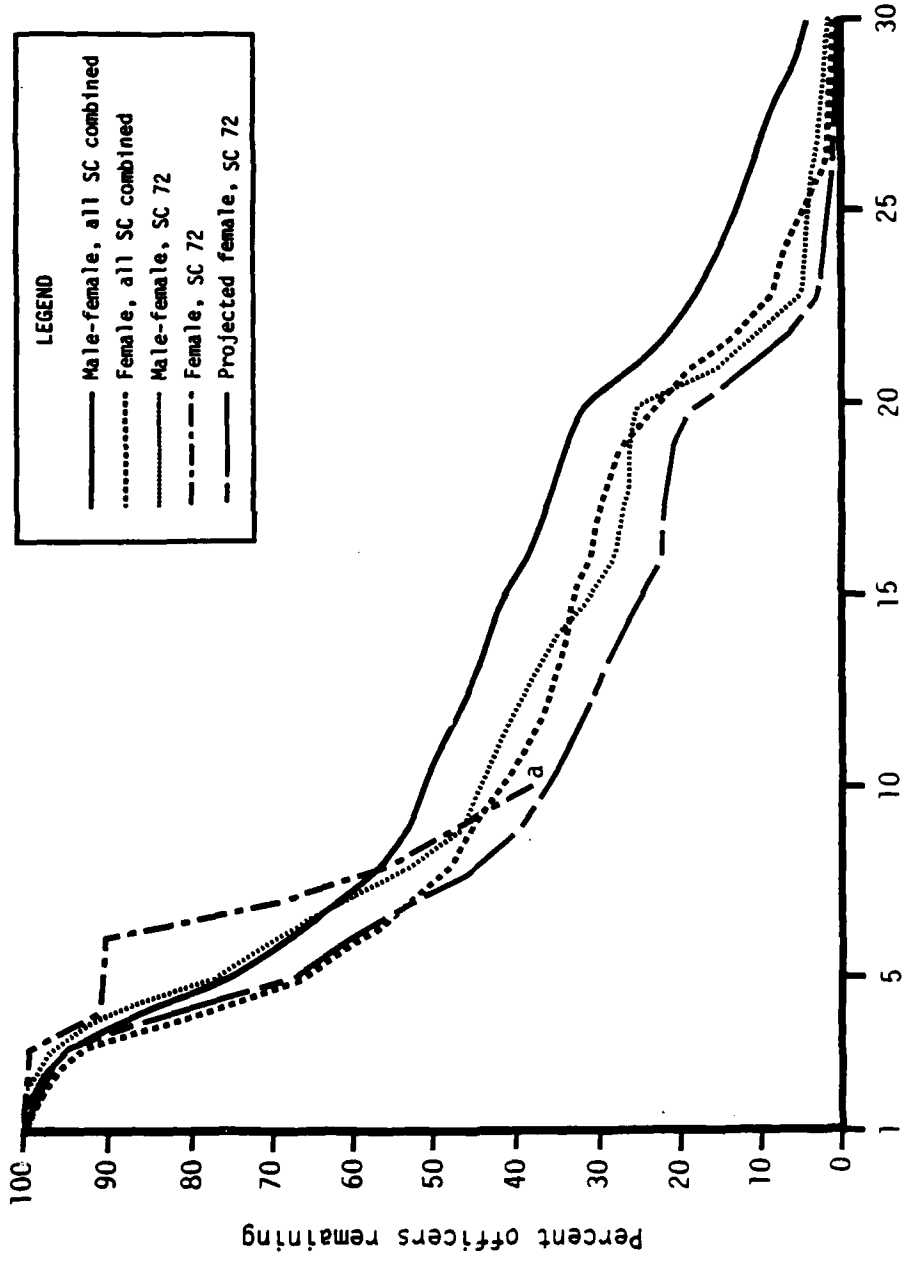
[a]Data incomplete for outyears.

Figure E-23. Survivability Curve, SC 54 - Operations Plans Training/Force Development



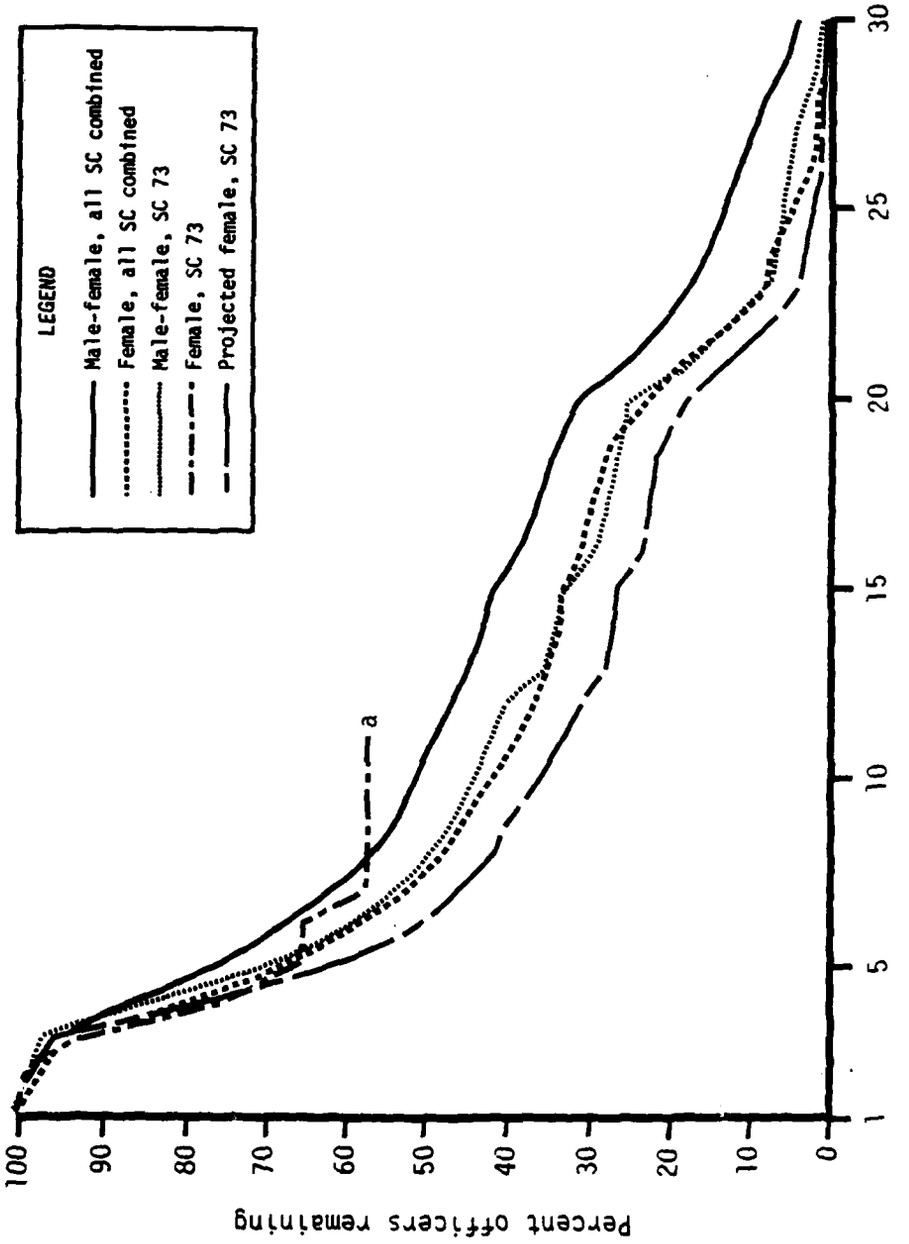
[a]Data incomplete for outyears.

Figure E-24. Survivability Curve, SC 71 - Aviation Logistics



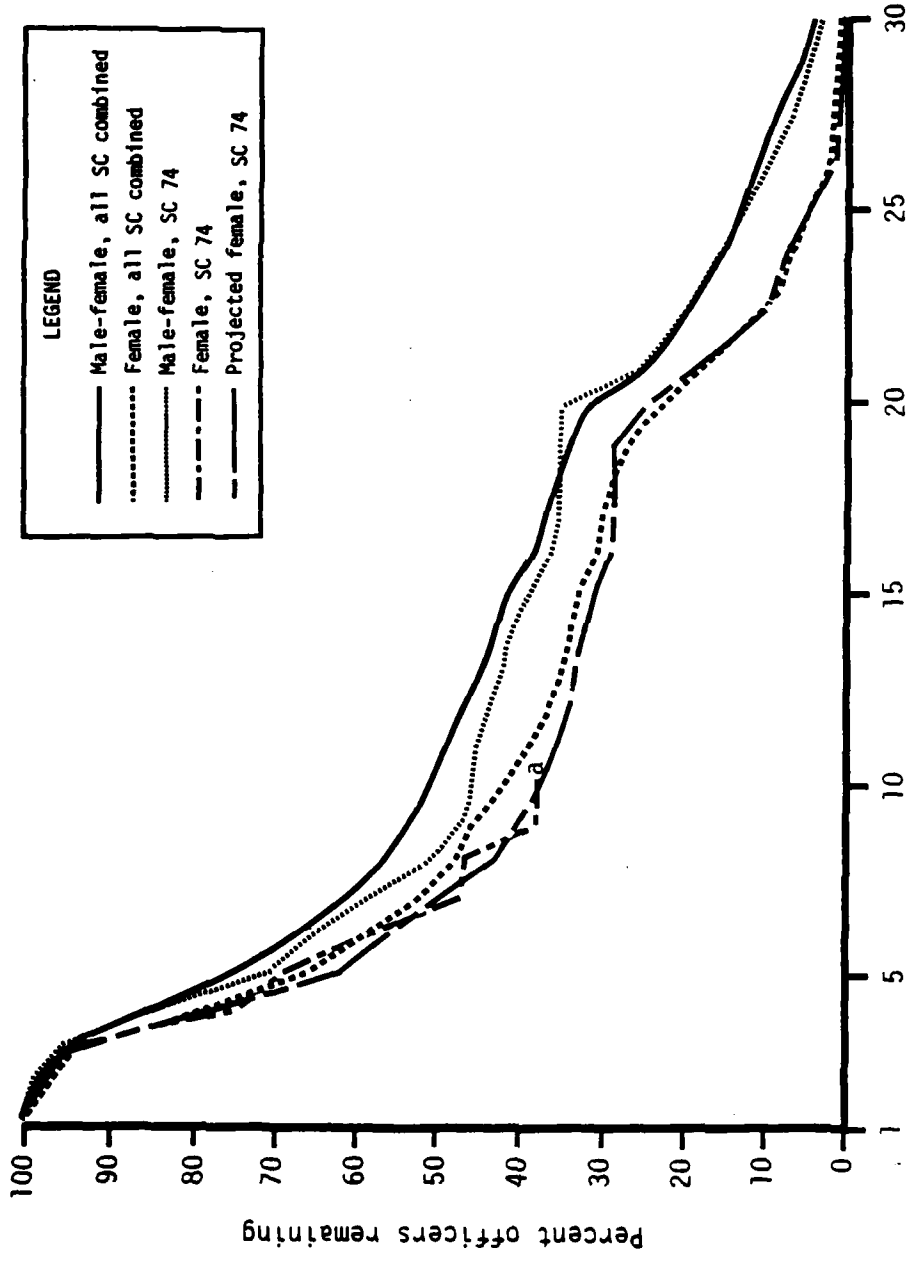
[a]Data incomplete for outyears.

Figure E-25. Survivability Curve, SC 72 - Communications-Electronic Materiel Management



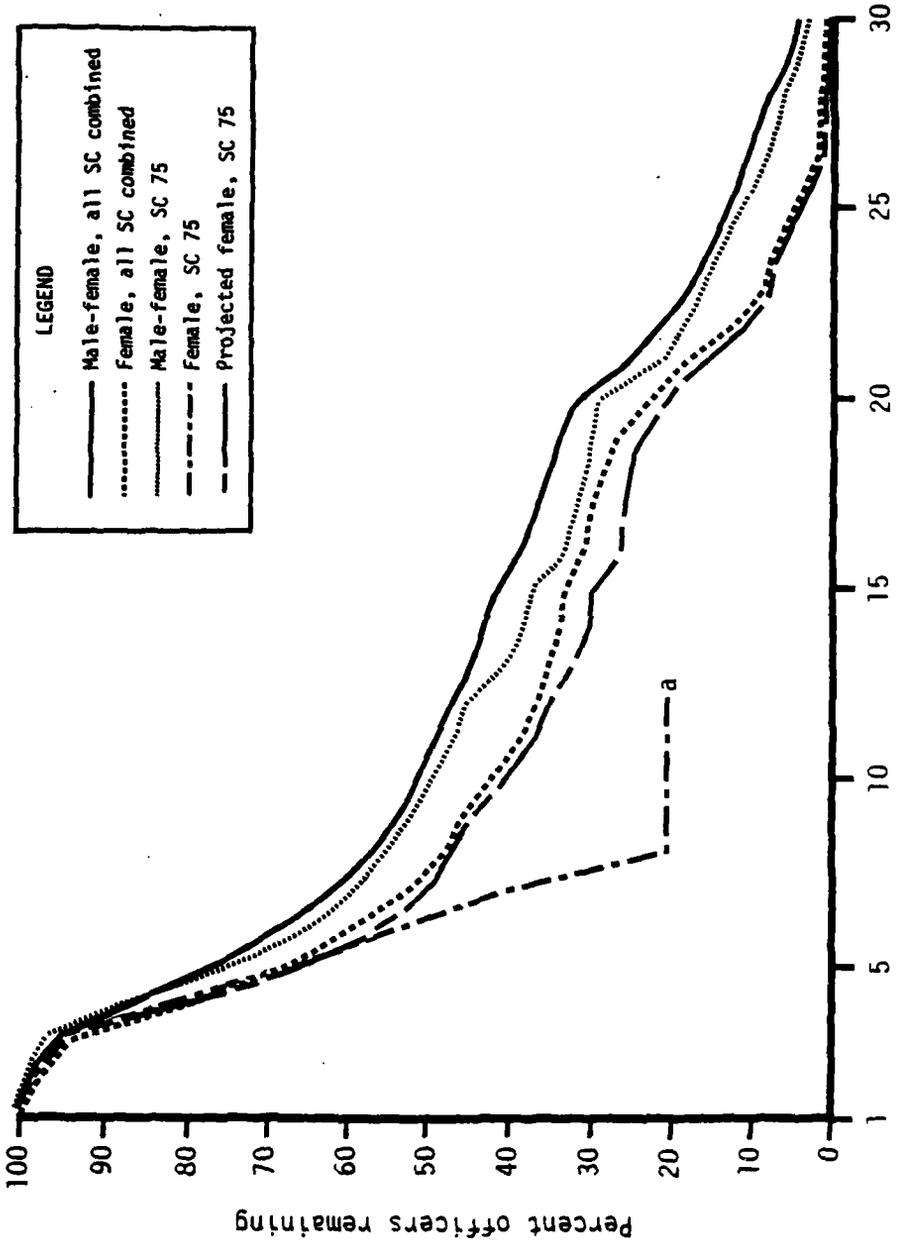
[a]Data incomplete for outyears.

Figure E-26. Survivability Curve, SC 73 - Missile Materiel Management



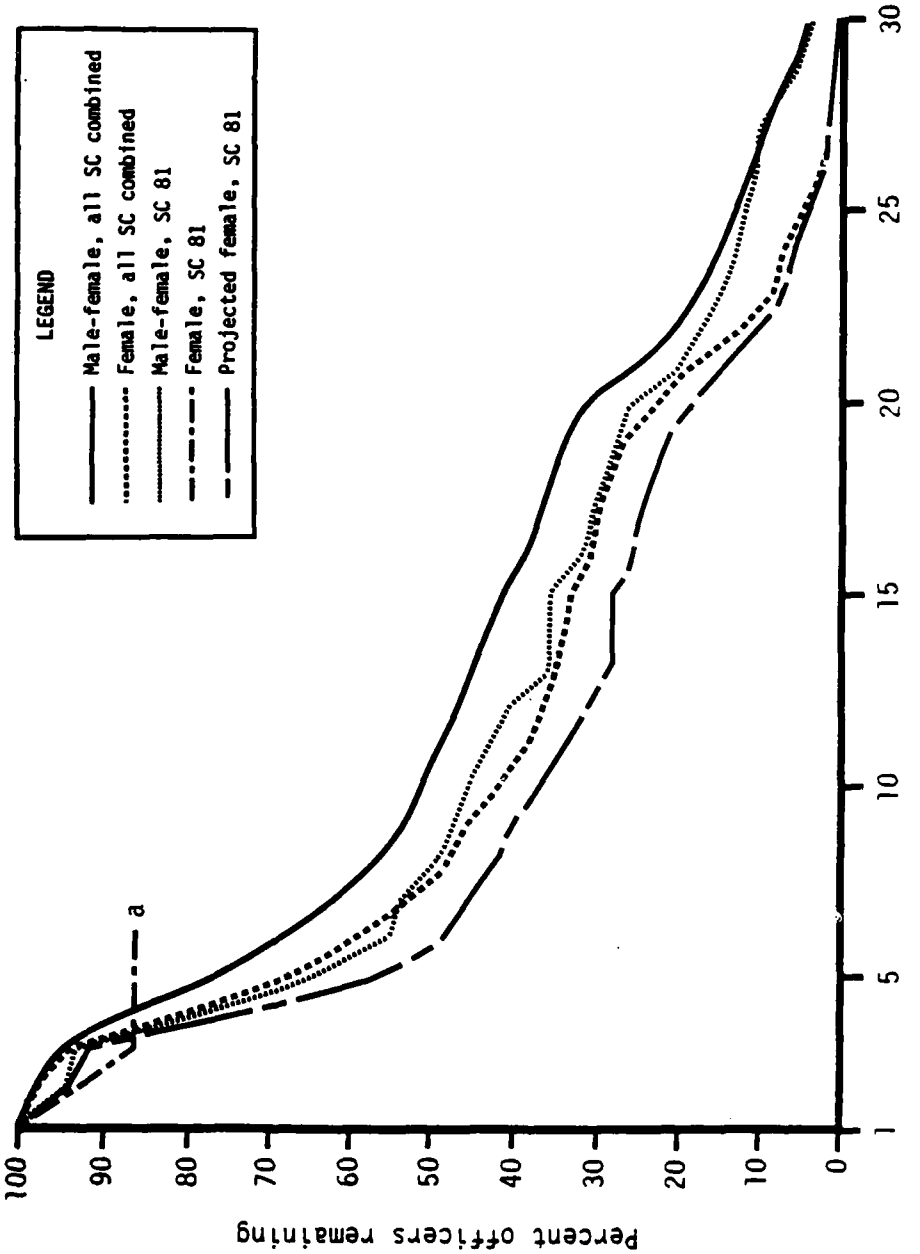
[a]Data incomplete for outyears.

Figure E-27. Survivability Curve, SC 74 - Chemical



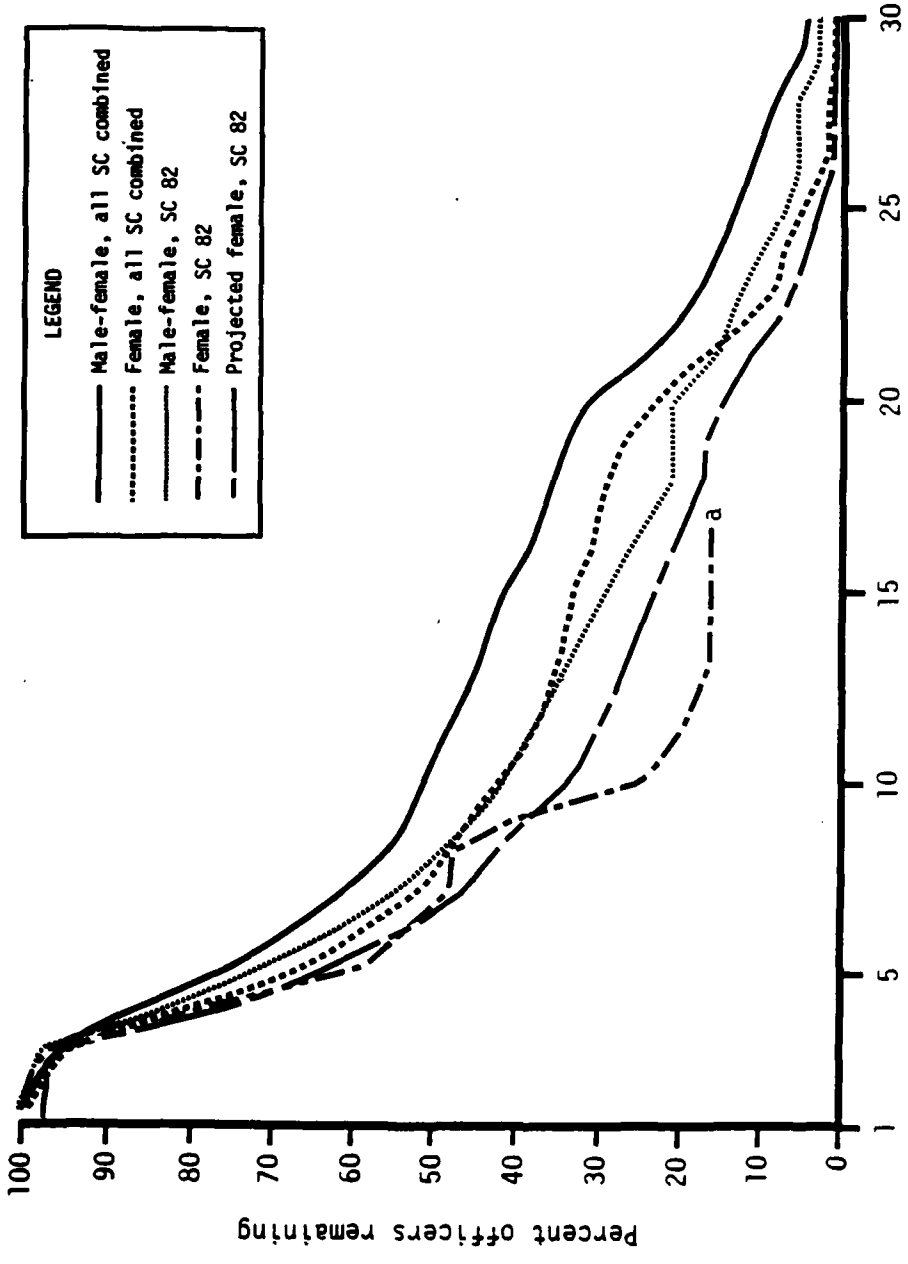
[a]Data incomplete for outyears.

Figure E-28. Survivability Curve, SC 75 - Munitions Materiel Management



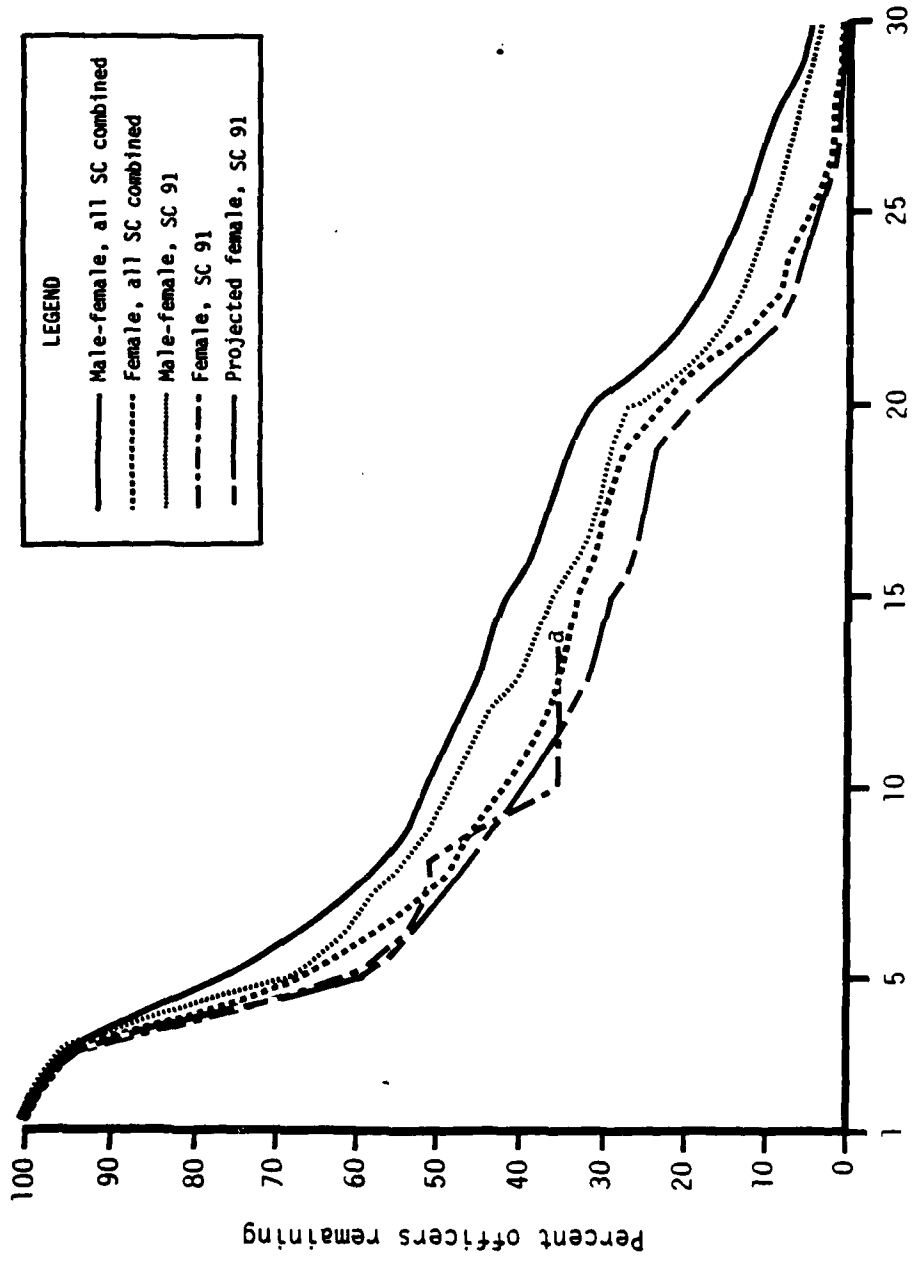
[a]Data incomplete for outyears.

Figure E-29. Survivability Curve, SC 81 - Petroleum Management



[a]Data incomplete for outyears.

Figure E-30. Survivability Curve, SC 82 - Subsistence Management



[a]Data incomplete for outyears.

Figure E-31. Survivability Curve, SC 91 - Maintenance Management

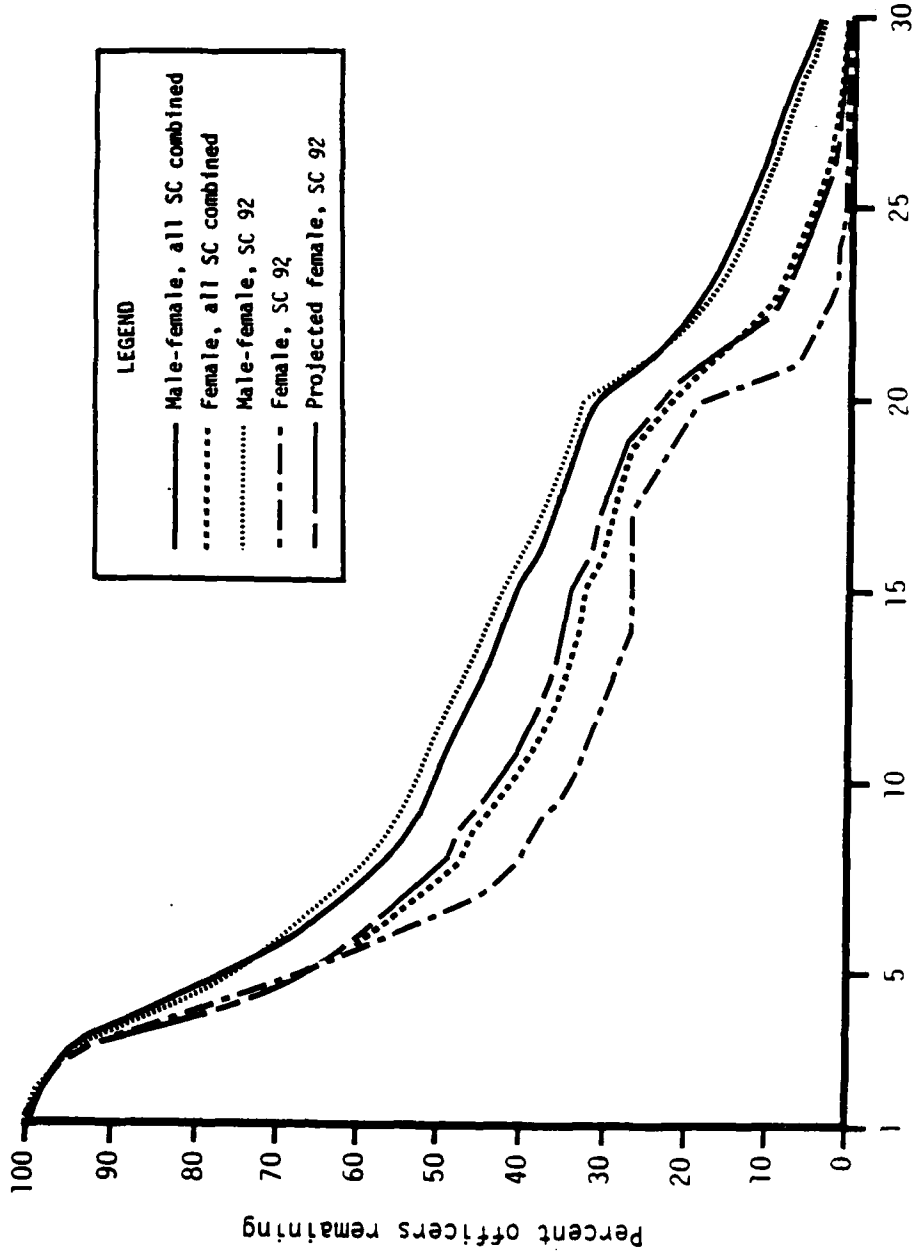
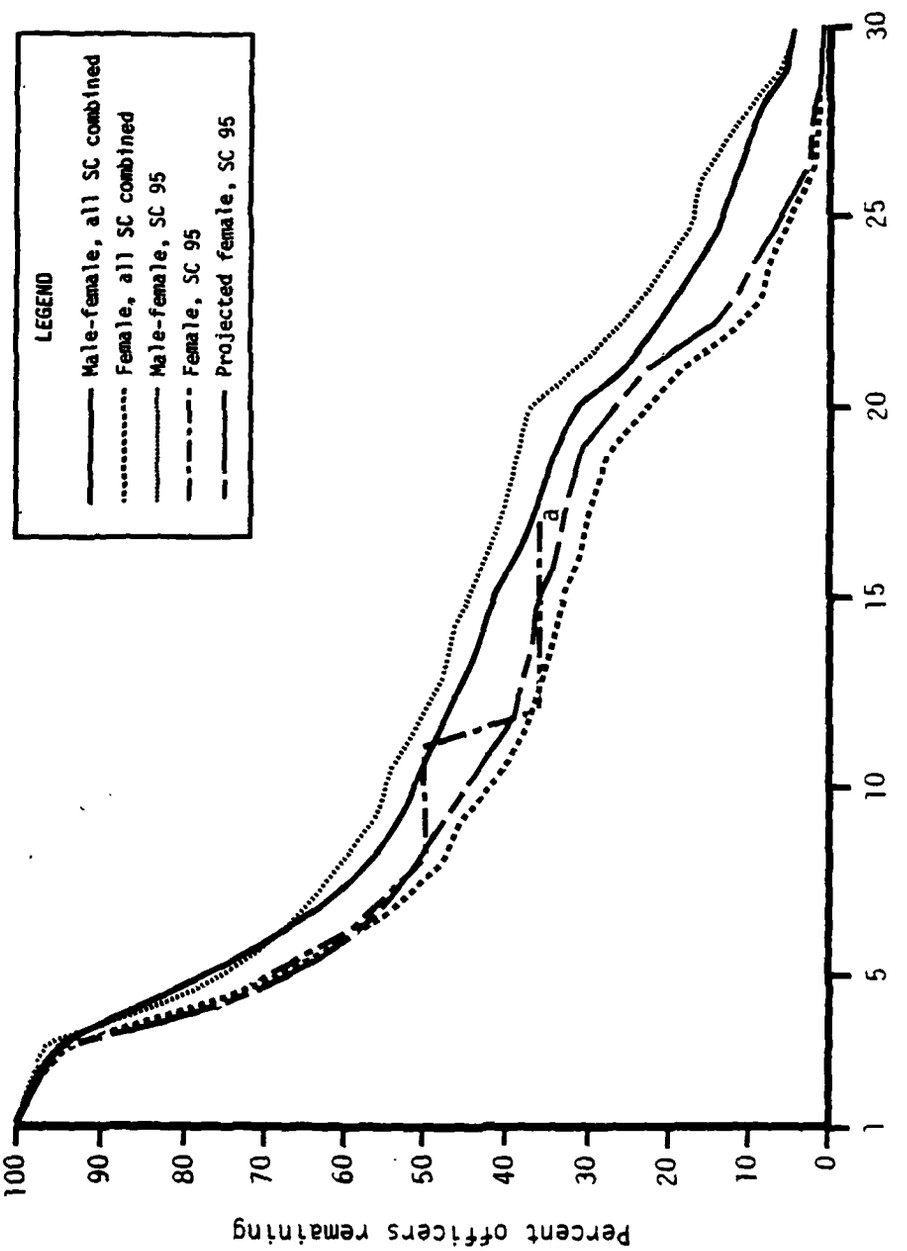
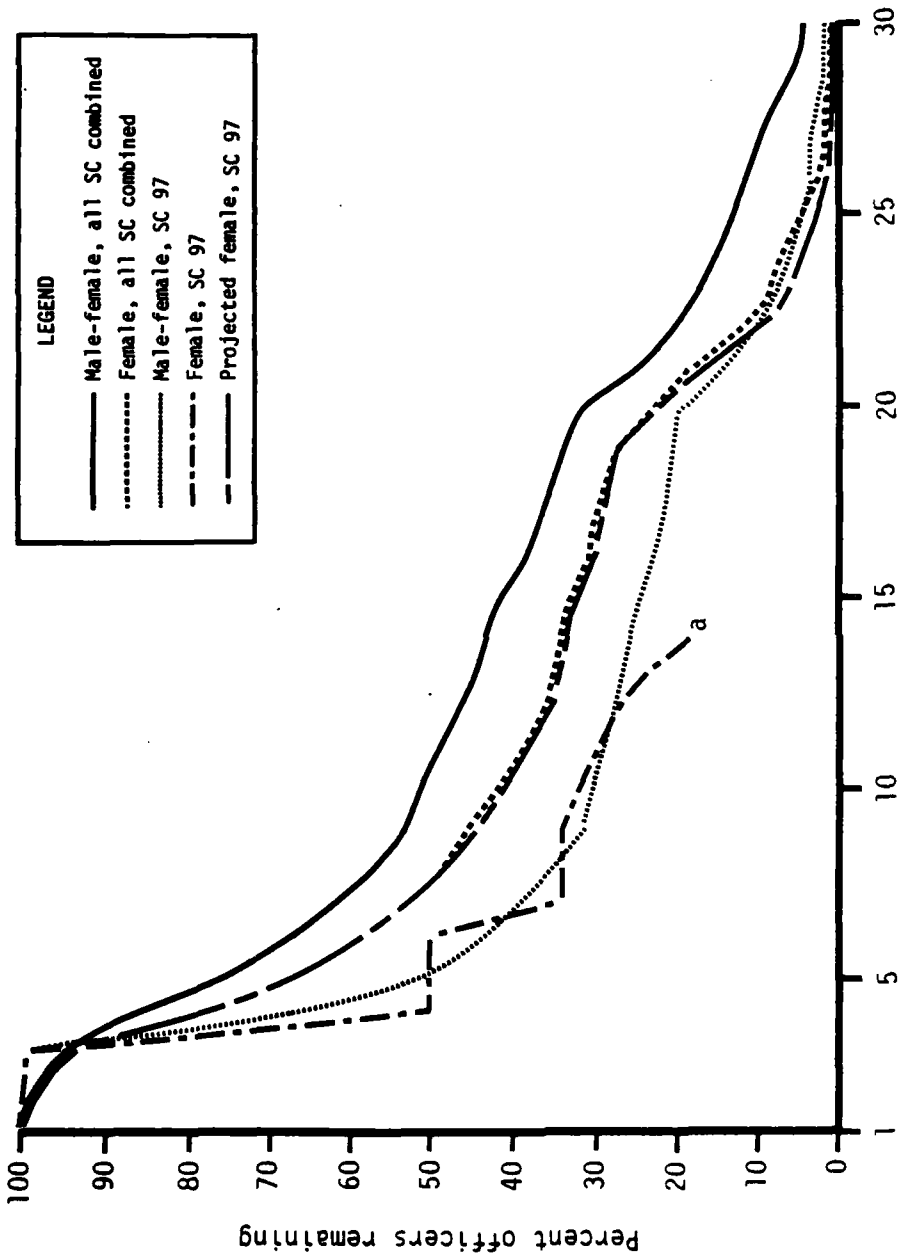


Figure E-32. Survivability Curve, SC 92 - Materiel/Services Management



[a]Data incomplete for outyears.

Figure E-33. Survivability Curve, SC 95 - Transportation



[a]Data incomplete for outyears.

Figure E-34. Survivability Curve, SC 97 - Procurement

APPENDIX F

SUPPORTING DATA/ANALYSIS

This appendix contains tabular data supporting the findings presented in Chapter 5.

Table F-1. Alternate Continuation Rate Projections

Spec	YG 84 accessions (female C-RATE)	YG 84 accessions (combined M/F C-RATE)	YG 84 ADSPEC designations (female C-RATE)	YG 84 ADSPEC designations (combined M/F C-RATE)
11	0	0	0	0
12	0	0	0	0
13	24	21	0	0
14	24	21	0	0
15	21	17	0	0
21	17	16	0	0
22	0	0	0	6
25	128	116	0	0
27	18	17	12	14
31	73	66	0	0
35	50	44	7	14
36	36	31	9	14
37	38	33	14	9
41	0	0	67	57
42	110	98	1	14
43	0	0	0	10
44	24	22	0	1
45	0	0	25	34
46	0	0	6	8
48	0	0	16	23
49	0	0	33	28
51	0	0	43	61
52	0	0	7	9
53	0	0	65	70
54	0	0	16	23
71	0	0	11	11
72	16	14	5	6
73	23	21	1	3
74	18	16	2	0
75	38	33	11	1
81	11	10	3	1
82	6	5	3	1
91	88	80	0	10
92	70	62	22	39
95	68	60	0	0
97	0	0	19	29
Total	901	803	412	496

Table F-2. Alternate Casualty Replacement Policies[a]

Casualty replacement set-asides, male-only				YG 84 accessions			
SC	D+30	D+60	D+90	SC	D+30	D+60	D+90
11	0	0	0	11	0	0	0
12	0	0	0	12	0	0	0
13	642	720	770	13	24	24	23
14	108	110	110	14	24	24	24
15	778	905	1,001	15	21	19	18
21	1,095	1,106	1,119	21	17	17	18
22	16	16	16	22	0	0	0
25	460	566	632	25	128	125	124
27	6	6	6	25	128	125	124
31	183	201	209	31	73	73	73
35	526	560	583	35	50	50	50
36	63	63	72	36	36	36	36
37	195	202	206	37	38	38	38
41	93	93	93	41	0	0	0
42	77	77	85	42	110	111	113
43	0	0	0	43	0	0	0
44	14	14	14	44	24	25	25
45	19	19	19	45	0	0	0
46	9	12	12	46	0	0	0
48	61	68	68	48	0	0	0
49	0	0	0	49	0	0	0
51	0	0	0	51	0	0	0
52	0	0	0	52	0	0	0
53	14	14	14	53	0	0	0
54	9	9	9	54	0	0	0
71	45	48	49	71	0	0	0
72	33	33	33	72	16	16	16
73	8	8	8	73	23	23	24
74	499	558	597	74	18	16	14
75	10	16	20	75	38	38	38
81	10	10	10	81	11	12	12
82	6	6	6	82	6	6	6
91	89	108	117	91	88	90	90
92	320	330	341	92	70	72	72
95	29	31	36	95	668	68	69
97	0	0	0	97	0	0	0
Total	5,417	5,909	6,255	Total	901	902	902

[a](6,255 - 5,417) ÷ 37,491 noncombat authorizations x 100 = 2.2 percent increase.

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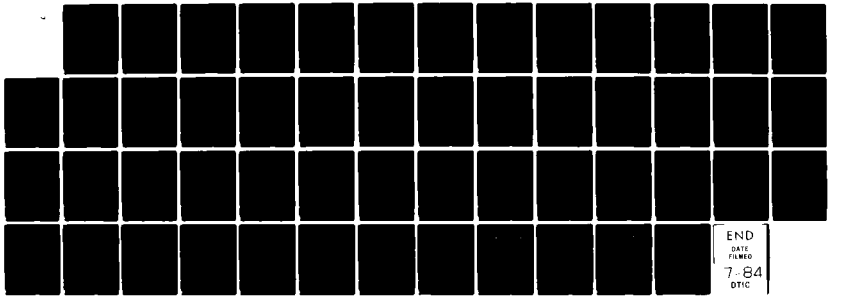

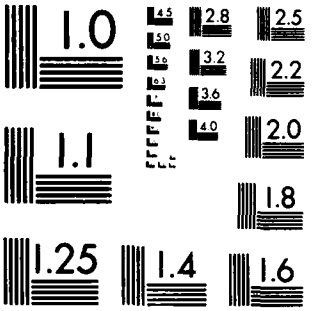

Table F-3. Alternate CONUS Rotation Policy[a]

SC	Male-only set-asides	
	48 Mos	24 Mos
11	0	0
12	0	0
13	642	603
14	108	82
15	778	769
21	1,095	1,064
22	16	10
25	460	460
27	6	4
31	183	183
35	526	526
36	63	63
37	195	195
41	93	75
42	77	75
43	0	0
44	14	14
45	19	16
46	9	9
48	61	61
49	0	0
51	0	0
52	0	0
53	14	10
54	9	9
71	45	45
72	33	24
73	8	8
74	499	499
81	10	10
82	6	4
91	89	89
92	320	297
95	29	26
97	0	0
Total	5,417	5,228

Summary

Set-aside		Overall set-aside
48 months:	663	5,417
24 months:	118	5,228
Difference:	545	189

[a](189 ÷ 37,491 noncombat authorizations) x 100 = 0.5 percent.

Table F-4. Accession Presets, FY 84

SC	Preset	YG 77 ADSPEC designation	YG 84 ADSPEC designations [a]
11	0	0	0
12	0	0	0
13	20	0	0
14	25	0	0
15	20	0	0
21	20	0	0
22	0	1	4
25	105	0	0
27	21	11	14
31	71	0	0
35	21	0	17
36	38	1	8
37	23	8	21
41	0	21	65
42	111	0	2
43	0	2	11
44	25	0	0
45	0	13	24
46	0	1	6
48	0	8	16
49	0	18	32
51	0	23	41
52	0	3	6
53	0	33	64
54	0	8	16
71	0	5	11
72	19	3	2
73	25	6	2
74	9	0	7
75	40	8	11
81	9	4	5
82	6	2	3
91	101	8	0
92	108	18	3
95	77	3	0
97	0	10	20
Total	900	218	411

[a]After 8 years the number of ADSPEC designations remain constant.

Table F-5. Alternate Utilization Rate Policy

SC	YG 77 ADSPEC designations (U-RATE = 0.67)	YG 77 ADSPEC designations (U-RATE = 0.33)
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
21	0	0
22	1	1
25	0	9
27	10	9
31	0	8
35	0	0
36	0	0
37	8	3
41	23	2
42	0	0
43	2	0
44	0	0
45	13	12
46	1	1
48	9	8
49	18	10
51	23	20
52	3	3
53	33	26
54	9	8
71	5	3
72	3	2
73	5	5
74	0	0
75	9	1
81	4	2
82	2	0
91	8	24
92	18	40
95	2	12
97	9	9
Total	218	218

Table F-6. Distribution of Accessions, Comparison of Unrestricted and Preferred (base case)

SC	YG 84 accessions (unrestricted)	YG 84 accessions (PREDIS)
11	0	0
12	0	0
13	61	24
14	64	24
15	54	21
21	25	17
22	0	0
25	108	128
27	18	18
31	60	73
35	46	50
36	31	36
37	30	38
41	0	0
42	84	110
43	0	0
44	22	24
45	0	0
46	0	0
48	0	0
49	0	0
51	0	0
52	0	0
53	0	0
54	0	0
71	0	0
72	14	16
73	21	23
74	16	18
75	30	38
81	9	11
82	5	6
91	73	88
92	72	70
95	59	68
97	0	0
Total	902	901

Table F-7. End FY 83 Women Officer Inventory by Year Group and Grade

YRGP	LT	CPT	MAJ	LTC	COL	Total
83	741	12	0	0	0	753
82	776	13	0	0	0	789
81	764	39	1	0	0	804
80	556	101	0	0	0	657
79	20	416	0	0	0	436
78	3	289	1	0	0	293
77	0	333	0	0	0	333
76	0	207	0	0	0	207
75	0	134	1	0	0	135
74	0	98	10	0	0	108
73	0	79	21	0	0	100
72	0	36	17	0	0	53
71	0	3	36	0	0	39
70	0	2	34	0	0	36
69	0	2	30	2	0	34
68	0	0	22	4	0	26
67	0	0	6	9	0	15
66	0	0	4	6	0	10
65	0	0	4	8	0	12
64	0	0	1	15	1	17
63	0	0	2	6	0	8
62	0	0	0	1	0	1
61	0	0	0	1	3	4
60	0	0	0	1	1	2
59	0	0	0	0	2	2
58	0	0	0	0	4	4
57	0	0	0	0	0	0
56	0	0	0	1	0	1
55	0	0	0	0	0	0
54	0	0	0	0	0	0
Total	2,860	1,765	190	54	11	4,879

Table F-8. Women Officer Inventory End FY 83 by Specialty Code

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	1	0	0	0	0	1
12	1	0	0	0	0	1
13	160	12	0	0	0	172
14	158	14	1	0	0	173
15	77	24	1	0	0	101
21	118	32	2	0	0	15
22	21	8	1	0	0	30
25	265	213	8	3	0	489
27	25	10	1	0	0	36
31	200	137	24	3	2	366
35	141	197	13	8	1	360
36	89	69	11	3	0	172
37	127	105	6	0	0	239
41	0	153	87	28	9	277
42	333	416	83	22	6	860
43	12	55	5	0	0	72
44	83	90	9	4	0	186
45	2	24	4	7	0	37
46	1	70	18	2	1	92
48	0	30	14	2	1	47
49	0	15	1	1	0	17
51	0	23	2	1	0	26
52	0	2	0	0	0	2
53	7	49	8	2	0	66
54	0	21	5	2	0	28
71	52	24	1	0	0	77
72	41	30	0	0	0	71
73	28	17	1	0	0	46
74	70	40	1	1	0	112
75	65	26	1	0	0	92
81	29	9	0	0	0	38
82	25	28	8	2	1	64
91	263	134	3	1	0	401
92	318	196	39	11	1	565
95	185	136	9	1	0	331
97	0	34	13	3	0	50

[a]Officers holding an ADSPEC are double counted.

Table F-9. End FY 84 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
84	898	0	0	0	0	898
83	735	0	0	0	0	735
82	758	0	0	0	0	758
81	528	145	0	0	0	673
80	15	534	0	0	0	549
79	3	386	0	0	0	389
78	0	259	0	0	0	259
77	0	303	0	0	0	303
76	0	197	0	0	0	197
75	0	121	0	0	0	121
74	0	98	2	0	0	100
73	0	45	47	0	0	92
72	0	6	45	0	0	51
71	0	0	35	0	0	35
70	0	1	34	0	0	35
69	0	1	28	2	0	31
68	0	0	18	6	0	24
67	0	0	3	11	0	14
66	0	0	0	7	0	7
65	0	0	0	10	0	10
64	0	0	0	11	2	13
63	0	0	0	5	0	5
62	0	0	0	0	1	1
61	0	0	0	0	3	3
60	0	0	0	0	0	0
59	0	0	0	0	1	1
58	0	0	0	0	0	0
57	0	0	0	0	0	0
56	0	0	0	0	0	0
55	0	0	0	0	0	0
Total	2,937	2,096	212	52	7	5,304

Table F-10. Women Officer Inventory End FY 84 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	1	0	0	0	1
12	1	0	0	0	0	1
13	136	40	0	0	0	176
14	125	50	1	0	0	176
15						
21	95	49	4	0	0	148
22	10	15	2	0	0	27
25	329	235	9	3	0	576
27	37	26	0	0	0	63
31	228	145	26	5	1	405
35	145	200	20	6	1	372
36	101	75	9	2	0	187
37	129	124	15	0	0	268
41	2	158	83	28	6	277
42	357	428	77	23	4	889
43	6	57	5	0	0	68
44	80	94	12	3	0	189
45	4	30	6	5	1	46
46	1	58	20	3	0	82
48	2	38	17	3	0	60
49	0	32	1	1	0	34
51	0	41	5	0	0	46
52	0	5	0	0	0	5
53	5	77	13	2	0	97
54	1	25	7	4	0	37
71	40	36	1	0	0	77
72	44	36	2	0	0	82
73	43	25	2	0	0	70
74	70	49	1	1	0	121
75	77	55	1	0	0	133
81	33	17	0	0	0	50
82	21	34	6	3	0	64
91	274	180	5	0	0	459
92	292	257	46	8	1	604
95	202	154	10	2	0	368
97	0	38	15	1	0	54

[a]Officers holding an ADSPEC are double counted.

Table F-11. End FY 85 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
85	898	0	0	0	0	898
84	878	0	0	0	0	878
83	706	0	0	0	0	706
82	498	136	0	0	0	634
81	16	548	0	0	0	564
80	3	487	0	0	0	490
79	0	343	0	0	0	343
78	0	236	0	0	0	236
77	0	288	0	0	0	288
76	0	178	2	0	0	180
75	0	109	3	0	0	112
74	0	35	54	0	0	89
73	0	9	78	0	0	87
72	0	2	48	0	0	50
71	0	0	34	0	0	34
70	0	1	29	2	0	32
69	0	0	22	7	0	29
68	0	0	5	18	0	23
67	0	0	2	11	0	13
66	0	0	0	7	0	7
65	0	0	0	0	0	0
64	0	0	0	7	2	9
63	0	0	0	0	4	4
62	0	0	0	0	1	1
61	0	0	0	0	3	3
60	0	0	0	0	0	0
59	0	0	0	0	1	1
58	0	0	0	0	0	0
57	0	0	0	0	0	0
56	0	0	0	0	0	0
Total	2,999	2,372	277	52	11	5,711

Table F-12. Women Officer Inventory End FY 85 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	1	0	0	0	1
12	1	0	0	0	0	1
13	106	70	0	0	0	176
14	99	76	1	0	0	176
15	73	48	3	0	0	124
21	78	65	4	0	0	147
22	4	21	2	0	0	27
25	386	262	10	3	0	661
27	53	32	0	0	0	85
31	241	166	26	7	1	441
35	144	199	32	7	1	383
36	108	88	16	1	0	213
37	129	132	26	2	0	289
41	2	154	92	34	9	291
42	361	437	95	25	6	924
43	1	51	11	0	0	63
44	78	100	15	1	1	195
45	3	37	10	1	2	53
46	1	42	30	2	0	75
48	1	38	23	4	0	66
49	0	47	1	1	0	49
51	0	61	6	0	0	67
52	0	8	1	0	0	9
53	4	99	16	3	0	122
54	1	30	9	1	0	41
71	30	42	1	0	0	73
72	52	39	4	0	0	95
73	60	31	3	0	0	94
74	69	54	5	0	0	128
75	98	77	1	0	0	176
81	37	21	0	0	0	58
82	19	33	5	2	0	59
91	298	200	12	0	0	510
92	263	292	57	5	2	619
95	216	169	16	3	0	404
97	0	42	18	2	0	62

[a]Officers holding an ADSPEC are double counted.

Table F-13. End FY 86 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
86	898	0	0	0	0	898
85	878	0	0	0	0	878
84	844	0	0	0	0	844
83	464	127	0	0	0	591
82	15	515	0	0	0	530
81	4	499	0	0	0	503
80	0	433	0	0	0	433
79	0	313	0	0	0	313
78	0	225	0	0	0	225
77	0	260	3	0	0	263
76	0	162	4	0	0	166
75	0	36	53	0	0	89
74	0	9	75	0	0	84
73	0	5	80	0	0	85
72	0	2	48	1	0	51
71	0	1	28	2	0	31
70	0	0	23	9	0	32
69	0	0	6	22	0	28
68	0	0	3	19	0	22
67	0	0	1	10	0	11
66	0	0	0	7	0	7
65	0	0	0	0	0	0
64	0	0	0	2	4	6
63	0	0	0	0	4	4
62	0	0	0	0	1	1
61	0	0	0	0	2	2
60	0	0	0	0	0	0
59	0	0	0	0	1	1
58	0	0	0	0	0	0
57	0	0	0	0	0	0
Total	3,103	2,587	324	72	12	6,098

Table F-14. Women Officer Inventory End FY 86 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	0	0	0	0	0
12	1	0	0	0	0	1
13	84	91	0	0	0	175
14	83	91	1	0	0	175
15	67	64	3	0	0	134
21	67	70	4	1	0	142
22	1	20	2	0	0	23
25	446	274	12	5	0	737
27	68	46	0	0	0	114
31	257	188	27	9	0	481
35	144	199	42	5	2	392
36	110	102	25	2	0	239
37	124	152	37	4	0	317
41	2	163	103	41	10	319
42	379	444	103	30	6	962
43	0	48	14	0	0	62
44	81	102	17	4	1	205
45	1	52	12	2	2	69
46	0	34	31	3	0	68
48	0	44	27	5	1	77
49	0	63	1	1	0	65
51	0	83	7	0	0	90
52	0	11	2	0	0	13
53	2	126	20	5	0	153
54	0	35	13	1	0	49
71	13	53	1	0	0	67
72	54	51	5	0	0	110
73	76	35	4	0	0	115
74	68	61	6	0	0	135
75	126	97	1	0	0	224
81	41	27	0	0	0	68
82	18	32	2	3	0	55
91	320	219	18	2	0	559
92	244	320	64	12	2	642
95	232	177	23	4	0	436
97	0	58	17	4	0	69

[a]Officers holding an ADSPEC are double counted.

Table F-15. End FY 87 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
87	898	0	0	0	0	898
86	878	0	0	0	0	878
85	844	0	0	0	0	844
84	554	152	0	0	0	706
83	14	480	0	0	0	494
82	3	470	0	0	0	473
81	0	444	0	0	0	444
80	0	395	0	0	0	395
79	0	298	0	0	0	298
78	0	203	2	0	0	205
77	0	238	6	0	0	244
76	0	56	90	0	0	146
75	0	9	76	0	0	85
74	0	4	76	0	0	80
73	0	3	80	1	0	84
72	0	0	44	4	0	48
71	0	0	24	5	0	29
70	0	0	6	23	0	29
69	0	0	4	22	0	26
68	0	0	2	16	0	18
67	0	0	1	8	1	10
66	0	0	0	5	0	5
65	0	0	0	0	0	0
64	0	0	0	2	4	6
63	0	0	0	0	0	0
62	0	0	0	0	1	1
61	0	0	0	0	0	0
60	0	0	0	0	0	0
59	0	0	0	0	0	0
58	0	0	0	0	0	0
Total	3,191	2,752	411	86	6	6,446

Table F-16. Women Officer Inventory End FY 87 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	0	0	0	0	0
12	0	1	0	0	0	1
13	79	104	1	0	0	175
14	73	101	1	0	0	175
15	61	78	4	0	0	143
21	58	76	5	1	0	140
22	0	19	3	0	0	22
25	486	294	20	4	0	804
27	76	62	2	0	0	140
31	275	199	31	9	0	514
35	149	196	56	7	2	410
36	108	125	33	3	0	269
37	122	174	47	4	0	347
41	0	192	111	46	5	354
42	405	428	115	34	2	984
43	0	44	18	1	0	63
44	87	94	24	5	0	210
45	0	69	16	2	1	38
46	0	29	32	3	0	64
48	0	51	37	7	1	96
49	0	85	4	1	0	90
51	0	110	12	0	0	122
52	0	17	3	0	0	20
53	0	168	23	6	0	197
54	0	44	16	4	0	64
71	0	65	1	0	0	66
72	61	50	9	0	0	120
73	89	44	4	0	0	137
74	68	65	13	0	0	146
75	149	114	6	0	0	269
81	44	33	0	0	0	77
82	18	29	2	2	0	51
91	316	247	27	3	0	593
92	236	331	84	17	1	669
95	240	187	33	7	0	465
97	0	54	20	7	0	81

[a]Officers holding an ADSPEC are double counted.

Table F-17. End FY 88 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
88	898	0	0	0	0	898
87	878	0	0	0	0	878
86	844	0	0	0	0	844
85	554	152	0	0	0	706
84	16	574	0	0	0	590
83	3	438	0	0	0	441
82	0	418	0	0	0	418
81	0	405	0	0	0	405
80	0	376	0	0	0	376
79	0	270	3	0	0	273
78	0	187	4	0	0	191
77	0	76	131	0	0	207
76	0	14	123	0	0	137
75	0	3	78	0	0	81
74	0	2	75	1	0	78
73	0	0	70	6	0	76
72	0	0	37	13	0	50
71	0	0	5	21	0	26
70	0	0	5	23	0	28
69	0	0	2	19	1	22
68	0	0	0	12	2	14
67	0	0	0	4	1	5
66	0	0	0	0	5	5
65	0	0	0	0	0	0
64	0	0	0	0	3	3
63	0	0	0	0	0	0
62	0	0	0	0	1	1
61	0	0	0	0	0	0
60	0	0	0	0	0	0
59	0	0	0	0	0	0
Total	3,193	2,915	533	99	13	6,753

Table F-18. Women Officer Inventory End FY 88 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	0	0	0	0	0
12	0	1	0	0	0	1
13	69	107	0	0	0	177
14	72	106	1	1	0	180
15	60	84	6	0	0	150
21	57	76	6	3	0	142
22	0	16	4	1	0	21
25	489	335	29	7	0	860
27	76	79	6	0	0	161
31	275	218	38	9	1	541
35	149	187	71	7	2	416
36	108	127	49	3	0	287
37	122	183	63	2	0	371
41	0	215	123	47	10	395
42	405	426	134	32	6	1,003
43	0	41	23	1	0	65
44	88	91	31	9	1	220
45	0	77	24	4	2	107
46	0	23	31	4	0	58
48	0	54	45	10	0	109
49	0	98	13	1	0	112
51	0	128	20	1	0	149
52	0	20	6	0	0	26
53	0	198	39	5	0	242
54	0	51	22	4	1	78
71	0	62	2	0	0	64
72	61	57	12	1	0	131
73	89	56	9	1	0	155
74	68	66	19	0	0	153
75	150	141	20	0	0	311
81	44	39	1	0	0	84
82	18	28	2	1	0	49
91	317	274	40	3	0	634
92	236	332	101	23	1	693
95	240	209	38	7	2	496
97	0	57	25	9	0	91

[a]Officers holding an ADSPEC are double counted.

Table F-19. End FY 89 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
89	898	0	0	0	0	898
88	878	0	0	0	0	878
87	844	0	0	0	0	844
86	554	152	0	0	0	706
85	16	574	0	0	0	590
84	4	522	0	0	0	526
83	0	389	0	0	0	389
82	0	382	0	0	0	382
81	0	386	0	0	0	386
80	0	339	3	0	0	342
79	0	249	6	0	0	255
78	0	85	85	0	0	170
77	0	22	180	0	0	202
76	0	6	127	0	0	133
75	0	2	76	1	0	79
74	0	0	67	6	0	73
73	0	1	56	19	0	76
72	0	0	10	38	0	48
71	0	0	3	21	0	24
70	0	0	3	23	1	27
69	0	0	1	14	2	17
68	0	0	0	7	2	9
67	0	0	0	1	1	2
66	0	0	0	0	3	3
65	0	0	0	0	0	0
64	0	0	0	0	2	2
63	0	0	0	0	0	0
62	0	0	0	0	1	1
61	0	0	0	0	0	0
60	0	0	0	0	0	0
Total	3,194	3,109	617	130	12	7,062

Table F-20. Women Officer Inventory End FY 89 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	0	0	0	0	0
12	0	1	0	0	0	1
13	69	111	1	0	0	181
14	72	110	1	1	0	184
15	60	86	8	0	0	154
21	57	74	7	4	0	142
22	0	15	5	2	0	22
25	489	380	45	5	0	919
27	76	92	10	0	0	178
31	276	241	41	7	2	567
35	149	193	76	13	1	432
36	108	139	58	6	0	311
37	122	191	72	5	0	390
41	0	231	131	54	9	425
42	406	434	153	40	5	1,038
43	0	43	26	3	0	72
44	88	90	35	9	1	223
45	0	85	28	5	2	120
46	0	23	24	9	0	56
48	0	61	51	15	0	127
49	0	111	23	1	0	135
51	0	140	28	5	0	173
52	0	24	8	0	0	32
53	0	224	50	8	0	282
54	0	59	25	6	1	91
71	0	51	2	1	0	54
72	61	59	14	2	0	136
73	89	68	10	2	0	169
74	68	69	26	1	0	164
75	150	173	34	0	0	357
81	44	43	1	0	0	88
82	18	27	2	1	0	48
91	317	310	49	2	0	678
92	235	339	113	30	1	718
95	240	227	39	10	2	518
97	0	63	27	11	0	101

[a]Officers holding an ADSPEC are double counted.

Table F-21. End FY 90 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
90	898	0	0	0	0	898
89	878	0	0	0	0	878
88	844	0	0	0	0	844
87	554	152	0	0	0	706
86	16	574	0	0	0	590
85	4	522	0	0	0	526
84	0	464	0	0	0	464
83	0	355	0	0	0	355
82	0	364	0	0	0	364
81	0	349	4	0	0	353
80	0	310	7	0	0	317
79	0	95	147	0	0	243
78	0	16	146	0	0	162
77	0	10	184	0	0	194
76	0	4	124	1	0	129
75	0	0	65	5	0	70
74	0	1	53	18	0	72
73	0	0	16	57	0	73
72	0	0	8	38	0	46
71	0	0	2	17	1	20
70	0	0	2	18	3	23
69	0	0	1	7	2	10
68	0	0	0	2	2	4
67	0	0	0	1	1	2
66	0	0	0	0	2	2
65	0	0	0	0	0	0
64	0	0	0	0	0	0
63	0	0	0	0	0	0
62	0	0	0	0	0	0
61	0	0	0	0	0	0
Total	3,194	3,217	759	164	11	7,345

Table F-22. Women Officer Inventory End FY 90 by Specialty Code (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	69	114	8	0	0	191
14	72	106	1	1	0	180
15	60	88	12	1	0	161
21	57	72	12	4	1	146
22	0	15	7	2	0	24
25	489	414	64	7	0	974
27	76	103	16	0	0	195
31	276	255	49	10	2	592
35	149	188	89	17	0	443
36	108	135	66	10	0	319
37	122	191	77	13	0	403
41	0	238	146	57	8	449
42	406	451	168	54	5	1,084
43	0	40	31	3	0	74
44	88	94	35	10	0	227
45	0	84	38	7	0	129
46	0	24	18	15	0	57
48	0	63	51	18	1	133
49	0	117	37	2	0	156
51	0	143	46	6	0	195
52	0	25	13	1	0	39
53	0	225	75	10	0	310
54	0	61	33	8	1	103
71	0	42	3	1	0	46
72	61	69	16	3	0	149
73	89	75	14	3	0	180
74	68	70	32	3	0	173
75	150	192	52	1	0	395
81	44	48	2	0	0	94
82	18	27	4	0	0	49
91	317	318	72	0	0	710
92	235	332	136	35	1	739
95	240	241	49	11	2	543
97	0	62	36	11	1	110

[a]Officers holding an ADSPEC are double counted.

Table F-23. End FY 91 Inventory by Year Group (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
91	898	0	0	0	0	898
90	878	0	0	0	0	878
89	844	0	0	0	0	844
88	554	152	0	0	0	706
87	16	574	0	0	0	590
86	4	522	0	0	0	526
85	0	464	0	0	0	464
84	0	423	0	0	0	423
83	0	338	0	0	0	338
82	0	329	3	0	0	332
81	0	322	8	0	0	330
80	0	121	175	0	0	296
79	0	26	211	0	0	237
78	0	8	148	0	0	156
77	0	6	182	2	0	190
76	0	2	111	9	0	122
75	0	1	51	17	0	69
74	0	0	15	53	0	68
73	0	0	10	59	0	69
72	0	0	4	34	1	39
71	0	0	1	12	2	15
70	0	0	1	9	3	13
69	0	0	0	3	4	7
68	0	0	0	2	3	5
67	0	0	0	0	1	1
66	0	0	0	0	0	0
65	0	0	0	0	0	0
64	0	0	0	0	0	0
63	0	0	0	0	0	0
62	0	0	0	0	0	0
Total	3,194	3,288	920	200	14	7,616

Table F-24. Officer Inventory End FY 91 by Specialty Code (base case)

SPEC	LT	CPT	MAJ	LTC	COL	Total[a]
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	85	123	18	0	0	226
14	83	111	8	1	0	203
15	73	105	13	2	0	193
21	64	66	16	3	1	150
22	0	17	10	2	0	29
25	458	416	80	6	1	961
27	68	98	22	0	0	188
31	261	254	61	12	1	589
35	175	202	104	27	0	508
36	123	160	79	12	0	374
37	129	197	98	17	0	441
41	0	247	163	63	11	484
42	392	447	175	68	6	1,088
43	0	41	35	7	0	83
44	87	94	37	10	0	228
45	0	92	48	9	0	149
46	0	23	14	20	0	57
48	0	66	57	24	2	149
49	0	116	55	1	0	172
51	0	148	63	5	0	216
52	0	26	16	1	0	43
53	0	235	96	11	0	342
54	0	62	40	8	1	111
71	0	42	4	1	0	47
72	57	64	20	4	0	145
73	82	80	20	3	0	188
75	138	181	66	1	0	386
81	44	48	5	0	0	97
82	18	28	5	0	0	51
91	315	327	82	9	0	733
92	246	341	149	38	2	776
95	240	250	61	18	2	571
97	0	70	37	10	1	118

[a]Officers holding an ADSPEC are double counted.

Table F-25. End FY 98 Women Officer Inventory by Year Group and Grade[a] (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
98	898	0	0	0	0	898
97	878	0	0	0	0	878
96	844	0	0	0	0	844
95	554	152	0	0	0	706
94	16	574	0	0	0	590
93	4	522	0	0	0	526
92	0	464	0	0	0	464
91	0	423	0	0	0	423
90	0	403	0	0	0	403
89	0	364	4	0	0	368
88	0	334	8	0	0	342
87	0	123	178	0	0	301
86	0	31	257	0	0	288
85	0	14	263	0	0	277
84	0	8	261	3	0	272
83	0	4	192	16	0	212
82	0	3	183	49	0	235
81	0	1	53	199	0	253
80	0	0	28	181	1	210
79	0	0	17	127	4	148
78	0	0	6	70	11	87
77	0	0	2	30	9	41
76	0	0	1	9	13	23
75	0	0	0	4	8	12
74	0	0	0	3	11	14
73	0	0	0	0	0	0
72	0	0	0	0	0	0
71	0	0	0	0	0	0
70	0	0	0	0	0	0
69	0	0	0	0	0	0
Total	3,194	3,420	1,453	691	57	8,815

[a]Inventory is aged 15 years with 900 annual accessions.

Table F-26. Women Officer Inventory End FY 98 by Specialty Code[a] (base case)

SC	LT	CPT	MAJ	LTC	COL	Total[b]
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	69	72	71	36	1	249
14	72	68	20	17	0	177
15	60	77	39	17	0	193
21	57	45	24	23	1	150
22	0	16	15	7	1	39
25	489	507	151	61	3	1,211
27	76	115	38	19	1	250
31	276	289	91	38	1	695
35	149	199	100	57	6	511
36	108	154	112	42	2	418
37	122	210	157	59	3	551
41	0	284	250	135	26	695
42	406	469	208	130	27	1,240
43	0	38	39	14	1	92
44	88	92	32	19	0	231
45	0	99	78	36	0	213
46	0	25	6	4	1	36
48	0	72	92	42	5	211
49	0	138	118	53	4	313
51	0	181	131	51	0	363
52	0	32	44	22	4	102
53	0	256	199	101	6	562
54	0	66	66	34	3	169
71	0	44	19	5	0	68
72	61	71	30	16	0	178
73	89	83	41	19	0	232
74	68	76	64	28	6	242
75	150	203	117	67	1	538
81	44	54	9	5	0	112
82	18	31	5	6	0	60
91	317	347	150	57	2	873
92	235	370	150	57	2	873
95	250	269	119	51	7	686
97	0	75	44	19	0	138

[a]Inventory is aged 15 years with 900 annual accessions.

[b]Officers holding an ADSPEC are double counted.

Table F-27. End FY 13 Women Officer Inventory by Year Group and Grade[a] (base case)

YRGP	LT	CPT	MAJ	LTC	COL	Total
13	898	0	0	0	0	898
12	878	0	0	0	0	878
11	844	0	0	0	0	844
10	554	152	0	0	0	706
09	16	574	0	0	0	590
08	4	522	0	0	0	526
07	0	464	0	0	0	464
06	0	423	0	0	0	423
05	0	403	0	0	0	403
04	0	364	4	0	0	368
03	0	334	8	0	0	342
02	0	123	178	0	0	301
01	0	31	257	0	0	288
00	0	14	263	0	0	277
99	0	8	261	3	0	272
98	0	4	226	19	0	249
97	0	3	180	62	0	245
96	0	1	49	182	0	232
95	0	0	32	186	1	219
94	0	0	19	159	5	183
93	0	0	11	121	18	150
92	0	0	4	55	16	75
91	0	0	1	22	23	46
90	0	0	0	12	27	39
89	0	0	0	6	20	26
88	0	0	0	3	10	13
87	0	0	0	2	6	8
86	0	0	0	1	7	8
85	0	0	0	0	2	2
84	0	0	0	0	2	2
Total	3,194	3,420	1,493	833	137	9,077

[a]Inventory is aged 30 years to steady state with 900 annual accessions.

Table F-28. Women Officer Inventory End FY 13 by Specialty Code[a]

SC	LT	CPT	MAJ	LTC	COL	Total[b]
11	0	0	0	0	0	0
12	0	0	0	0	0	0
13	69	72	61	36	0	238
14	72	68	0	0	0	140
15	60	77	27	16	0	180
21	57	45	11	5	0	118
22	0	16	12	8	0	36
25	489	507	169	97	26	1,288
27	76	114	43	28	11	272
31	276	289	108	53	5	731
35	149	199	98	45	5	496
36	108	154	110	59	0	431
37	122	210	154	67	0	553
41	0	284	267	156	46	753
42	406	469	223	141	58	1,297
43	0	38	39	14	0	91
44	88	92	28	12	0	220
45	0	99	74	39	0	212
46	0	25	6	3	0	34
48	0	72	96	54	10	232
49	0	138	128	72	10	348
51	0	181	130	66	6	383
52	0	32	50	40	10	132
53	0	258	211	121	30	620
54	0	66	66	43	0	175
71	0	44	19	9	0	72
72	61	71	27	12	0	171
73	89	83	42	24	0	238
74	68	76	77	46	6	273
75	150	203	120	78	3	554
81	44	54	6	4	0	108
82	18	31	6	4	0	59
91	317	347	161	82	15	922
92	235	370	252	140	19	1,016
95	240	269	126	77	14	726
97	0	75	39	15	0	129

[a]Inventory is aged 30 years to steady state with 900 annual accessions.
[b]Officers holding an ADSPEC are double counted.

Table F-29. Accessions, PREDIS, FY 84[a]

SC	YG 84 accessions
11	0
12	0
13	24
14	24
15	21
21	17
22	0
25	128
27	18
31	73
35	50
36	36
37	38
41	0
42	110
43	0
44	24
45	0
46	0
48	0
49	0
51	0
52	0
53	0
54	0
71	0
72	16
73	23
74	18
75	38
81	11
82	6
91	88
92	70
95	68
97	0
Total	901[b]

[a]Accessions each year are projected to remain constant at 900 lieutenants.

[b]AGEBGPR rounds off 900 to 901.

Table F-30. Branching Assignments
(page 1 of 2 pages)

SC	YG 77 ADSPEC designations	YG 78 ADSPEC designations	YG 79 ADSPEC designations	YG 80 ADSPEC designations
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
21	0	0	0	0
22	1	2	1	0
25	0	0	0	4
27	10	7	12	14
31	0	0	0	0
35	0	0	0	3
36	0	7	9	15
37	8	3	12	12
41	23	29	41	60
42	0	0	0	0
43	2	2	4	8
44	0	0	0	0
45	13	11	16	22
46	1	3	2	5
48	9	7	11	15
49	18	16	21	31
51	23	21	28	39
52	3	3	4	6
53	33	19	40	58
54	9	7	11	15
71	5	3	1	5
72	3	3	6	4
73	5	4	4	6
74	0	0	1	1
75	9	13	17	15
81	4	2	4	3
82	2	0	0	0
91	8	1	11	3
92	18	7	8	8
95	2	3	1	0
97	9	9	12	17
Total	218	192	277	369

Table F-30. Branching Assignments
(page 2 of 2 pages)

SC	YG 81 ADSPEC designations	YG 82 ADSPEC designations	YG 83 ADSPEC designations	YG 84 ADSPEC designations[a]
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
21	0	0	0	0
22	1	2	3	4
25	2	7	3	0
27	16	15	13	12
31	0	0	0	0
35	5	4	6	7
36	12	7	4	9
37	15	10	7	14
41	62	54	51	67
42	0	1	14	1
43	8	9	8	10
44	0	0	2	0
45	22	20	19	25
46	5	5	5	6
48	15	14	13	16
49	30	29	26	33
51	38	37	34	43
52	6	6	5	7
53	58	55	50	65
54	15	14	13	16
71	7	0	1	11
72	7	2	6	5
73	6	5	6	1
74	1	1	0	2
75	17	19	22	11
81	5	4	4	3
82	2	2	2	3
91	8	14	0	0
92	2	5	6	22
95	1	1	0	0
97	17	17	15	19
Total	383	359	338	412

[a]After YG 84, ADSPEC designations reach steady state.

Table F-31. Proponent Preference Matrix (PPM) (Female)
(percent ADPSEC distribution)

INSPEC	ADSPEC																																Total %
	13	14	15	21	22	25	27	31	35	36	37	41	42	43	44	45	46	48	49	51	52	53	54	71	72	73	75	81	82	91	92	95	97	
11																																		100
12																																		100
13							1		6	2	1	10	1			4	1	15	4	7	5	6	17		1	4	6			3	3		1	100
14					1	1	3	1	1	1	1	5	2	1		6	2	1	15	15	3	7	16		1	5	2	1	1	1	6		1	100
15						2			4		2	6	1			1	2	8	6	15		2	12	24						1	2	1	10	100
21					56		1		1	1	2	4	1			1	2		7	7	1	1	9			1			1	1	1		1	100
22																																		100
25							29				7								6	7		18	6		27									100
27						34					11								11	22		11			11.									100
31									5	3	3	5	1			11	3	12	4	9		12	8							3	3	7	8	100
35										16	29	3				1		34	6	3		3	2								2			100
36					2	2			36		30	6				1	2	2	2	7		8											2	100
37						9	5		32	24								4	3	10	9	2												100
41																																		100
42												28		24	1	7	3		4			30	2										1	100
43																																		100
44												9		1		50	1		2	2		25	2								2		6	100
45																																		100
46																																		100
48																																		100
49																																		100
51																																		100
52																																		100
53																																		100
54																																		100
71																3			1	7	15	5	3							9	9	40	5	100
72						10	10												10	15		10	10							15	15		5	100
73							3												3	20	5	2	6		10		7			22	10		12	100
74									4			3	1						10	25	10	2	20				16			1	6		2	100
75																			3	12	8	5	5				5			18	12	5	20	100
81					7	7										14			7			7	14							7	23	14		100
82												2		2		3			3	7		2								18	48	12	3	100
91																7			16	23		5					4				30		15	100
92												2				5		4	5	8		10	4					4	5	40		5	8	100
95									1	1	1	3	7			6	2	1	6	8	1	8	8			1			1	8	31		5	100
97																																		

Tabel F-32. Branching by Proponent Preference Matrix (YG 77, INSPEC/ADSPEC pairs)

INSPEC	YG 77	No. ADSPEC	ADSPEC 22	25	27	31	35	36	37	41	42	43	44	45	46	48	49	51	52	53	54	71	72	73	74	75	81	82	91	92	95	97
11			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	1		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	32	1	0	0	9	0	0	0	2	0	0	0	0	0	0	0	2	2	0	6	2	0	9	0	0	0	0	0	0	0	0	0
27		10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1
35	26	9	0	0	0	0	0	4	8	1	0	0	0	0	0	9	2	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0
36	13	7	0	0	0	0	5	0	4	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
37	10	14	0	1	1	0	3	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
41		19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	52	1	0	0	0	0	0	0	0	15	0	12	1	4	2	0	2	0	0	16	1	0	0	0	0	0	0	0	0	0	0	1
43		13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	15	1	0	0	0	0	0	0	0	1	0	0	0	8	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1
45		15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46		3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48		11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49		12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51		15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53		33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54		8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
72	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	1	0	0	0	0	1	0	0	0	0	0	0
75	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	2
81		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	14	9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	0	1	0	0	0	0	0	1	0	0	0	4	0	2
92	12	12	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	1	5	0	1	1
95	15	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	1	5	0	1
97		8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	218	217	1	1	10	0	9	7	14	19	1	13	1	15	3	11	12	15	1	33	8	0	9	1	0	2	0	1	9	12	2	8

Table F-33. Distribution of Authorizations, Comparison of Unrestricted and Preferred (base case)

SC	Total auth	Male-only auth	Intchg auth	Set-asides	Unrestricted			Preferred (PREDIS)			SC
					Women officer auth	Percent of women officers	Percent of total auth	Women officer auth	Percent of women officers	Percent of total auth	
11	7,288	7,288	0	0	0	.0	.0	0	.0	.0	11
12	3,628	3,628	0	0	0	.0	.0	0	.0	.0	12
13	5,678	3,597	2,081	642	337	4.5	5.9	111	1.5	2.0	13
14	2,399	857	1,542	108	337	4.5	14.0	109	1.5	4.5	14
15	3,267	1,019	2,248	778	344	4.6	10.5	112	1.5	3.4	15
21	3,218	1,430	1,788	1,095	160	2.1	5.0	109	1.5	3.4	21
22	165	3	162	16	34	.5	20.6	34	.5	20.6	22
25	3,343	578	2,765	460	540	7.2	16.2	713	9.5	21.3	25
27	573	1	572	6	133	1.8	23.2	147	2.0	25.7	27
31	1,598	88	1,510	183	311	4.1	19.5	430	5.7	26.9	31
35	2,278	607	1,671	526	267	3.6	11.7	325	4.3	14.3	35
36	785	10	775	63	167	2.2	21.3	219	2.9	27.9	36
37	978	116	862	195	155	2.1	15.8	221	3.0	22.6	37
41	2,166	145	2,021	93	455	6.1	21.0	455	6.1	21.0	41
42	2,199	39	2,160	77	489	6.5	22.2	726	9.7	33.0	42
43	366	0	366	0	87	1.2	23.8	72	1.0	19.7	43
44	546	14	532	14	121	1.6	22.2	153	2.0	28.0	44
45	594	7	587	19	131	1.7	22.1	137	1.8	23.1	45
46	347	7	340	9	78	1.0	22.5	31	.4	8.9	46
48	1,138	92	1,046	61	230	3.1	20.2	81	1.1	7.1	48
49	756	0	756	0	177	2.4	23.4	170	2.3	22.5	49
51	912	0	912	0	215	2.9	23.6	278	3.7	30.5	51
52	170	0	170	0	40	.5	23.5	40	.5	23.5	52
53	947	2	945	14	218	2.9	23.0	314	4.2	33.2	53
54	1,948	5	1,943	9	451	6.0	23.2	85	1.1	4.4	54
71	840	76	764	45	169	2.2	20.1	107	1.4	12.7	71
72	370	3	367	33	78	1.0	21.1	94	1.3	25.4	72
73	438	4	434	8	101	1.3	23.1	124	1.7	28.3	73
74	1,172	368	804	499	72	1.0	6.1	94	1.3	8.0	74
75	744	3	741	10	171	2.3	23.0	239	3.2	32.1	75
81	216	3	213	10	47	.6	21.8	72	1.0	33.3	81
82	134	1	133	6	28	.4	20.9	28	.4	20.9	82
91	1,991	203	1,788	89	397	5.3	19.9	554	7.4	27.8	91
92	2,876	258	2,618	320	540	7.2	18.8	568	7.6	19.7	92
95	1,458	20	1,438	29	330	4.4	22.6	419	5.6	28.7	95
97	437	0	437	0	105	1.4	24.0	112	1.5	25.6	97
Total	57,963	20,472	37,491	5,417	7,515	100		7,483	100		

APPENDIX G

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GLOSSARY

1. ABBREVIATIONS, ACRONYMS, AND SHORT TERMS

ADSPEC	additional or alternate specialty (nonaccession specialty)
ARSTAF	Department of the Army Staff
ASA(MRA)	Office, Assistant Secretary of the Army for Manpower and Reserve Affairs
CAA	US Army Concepts Analysis Agency: an operating agency of the Department of the Army Staff under the control of the Director of the Army Staff where short-range studies are conducted for the Army Staff
CARPRO	career progression
CASRATE	casualty rate
CASREP	casualty replacement
CONUS	Continental United States
CPU	central processing unit
C-RATE	continuation rate
CY	calendar year
DA	Department of the Army
DCPC	direct combat probability code
DCSPER	Deputy Chief of Staff for Personnel
DIH	died in hospital
DNBI	disease/nonbattle injury
EEA	essential element(s) of analysis
FORECAST	Army Officer Strength and Personnel Management Data System (currently under development for ASA(MRA))
FORTRAN	Formula Translation (computer language)
FSA	force structure allowance (the authorized force)

FY	fiscal year
HQDA	Headquarters, Department of the Army
INSPEC	initial specialty
IRR	Individual Ready Reserve
KCMIA	killed, captured, missing in action
MACOM	major Army command
MILPERCEN	US Army Military Personnel Center
MTOE	Modification Table(s) of Organization and Equipment
OASYS	Officer Assignment System Study
OCONUS	outside the Continental United States
OCS	Officer Candidate School
ODCSPER	Office, Deputy Chief of Staff for Personnel
OMF	Officer Master File: the file of official records for all officers in the US Army
OPMS	Officer Personnel Management System
OTSG	Office of The Surgeon General
OTRA	other than Regular Army (source of commission such as ROTC or OCS)
PERSACS	Personnel Structure and Composition System
PPBES	Planning, Programing, Budgeting, and Execution System
PPM	proponent preference matrix
PREDIS	preferred distribution
R	ratio
RA	Regular Army
ROTC	Reserve Officers' Training Corps
ROTEQ	rotation equity
RTD	returns to duty

SC	specialty code (two-digit skill code for commissioned officers)
SRC	standard requirement code
SSC-NCR	US Army Soldier Support Center - National Capital Region
SSI	specialty skill identifier (two digits and one letter), digits correspond to SC identification
TAADS	The Army Authorization Document System
TDA	table(s) of distribution and allowances
THS	transient, holdee, student (individuals account)
TOE	table(s) of organization and equipment
TTHS	trainee, transient, holdee, student (individuals account)
U-RATE	utilization rate
UNCONSTR	unconstrained
UNIVAC 1100/82	UNIVAC Computer System - Model 1100/82
UNRESTR	unrestricted
USMA	US Military Academy
WIA	wounded-in-action
WITA	women in the Army
WITAPRG	Women in the Army Policy Review Group
YG	year group (calendar year in which individual entered service)
YOS	years of service

2. DEFINITIONS

accession specialty	specialty assigned an individual first entering the service; also called initial specialty (INSPEC)
additional specialty	specialty assigned during an individual's eighth year of service. Subsequent duty assignments will be served atlernately in both INSPEC and ADSPEC.

age the force	increase/decrease over time the size of the force based on C-RATEs
branching	assigning/awarding an additional specialty
budget end strength	FSA plus individuals account (THS)
casualty rate	reflects the number of casualties incurred per day during wartime conflict
central processing unit	the hardware component of a computer system which executes program and transfers data among system components
combat model	a computer wargaming simulation such as CEM or ATLAS
continuation rate	likelihood an individual will remain in the Service one additional year
direct combat probability code	a seven-level coding system with code P1 indicating the highest probability of combat
initial specialty	see accession specialty
interchange-ables	authorization which can be filled either by male or female service members
nonaccession specialty	see additional specialty
pairing	assigning/awarding an additional specialty
proponent preference	expressed as a percentage; describes how a specialty proponent desires officers in a specific INSPEC be branched among selected ADSPEC.
set-asides	number of authorizations reserved according to some rule
spaces	an alternative term for personnel authorizations
steady state	number of personnel in the force (or element of the force) attained after sufficient time has passed for potential changes (increases/decreases) to occur
survivability	likelihood an individual will remain in service a given number of years, the product of C-RATES for successive years beginning with year one through the given year

unrestricted authorizations	a distribution of interchangeable spaces based only on the three set-asides; not considered in the unrestricted distribution are factors such as logical pairing and/or pertinent management factors
utilization rate	percentage time an officer serves in a specialty
vulnerability rate	expressed as a percentage, the proportion of casualties distributed to a specialty such as infantry or armor

3. MODELS, ROUTINES, AND SIMULATIONS

AGEBGPR	Age by Grade and Pair--A model which uses a given FSA, THS and current personnel inventory to age the force, compute accessions by FY and assign ADSPEC by YG.
ATLAS	A Tactical, Logistical and Air Simulation--A theater level combat simulation for force effectiveness. This deterministic model plays opposing forces in ten independent sectors measuring forward edge of the battle area (FEBA) movement, loss of firepower, and personnel attrition.
CEM	Concepts Evaluation Model--Often called the warfighting model; CEM is a deterministic combat simulation of theater level, conventional warfare with a continuous FEBA.
CSM	Casualty Stratification Model--A model which provides a methodology to define casualties in terms of MOS, grade, and officer, warrant officer, and enlisted categories. Time is defined in discrete slices selected by the user/analyst. The model utilizes selected outputs of CEM and FASTALS to define casualties for combat and support personnel, respectively.
FASTALS	Force Analysis Simulation of Theater Administrative and Logistic Support--A model which computes time-phased administrative and logistic workloads for an active theater and rounds out the force structure with the minimum number of doctrinally required support units to perform the workload.
OFMM	Office Force Management Models--This is the aggregation of over 100 models used to assist the Army manage the officer corps.

PFM	Patient Flow Model--A model which uses FASTALS output, rates, and evacuation policies from OTSG to compute hospital admissions for DNBI, deaths in hospitals (DIH), and returns to duty (RTD).
TIM	Target Inventory Model--This model provides accession and ADSPEC plans and steady-state, but not YG, inventories.
WEEM	Women Enlisted Expansion Model--A model similar in design to WOSM used to compute enlisted women authorizations; its last major revision was 1979.
WOSM	Women Officer Strength Model--A model which uses PERSACS data and current Army policy to compute the maximum number of women officer authorizations in the force; originally developed in 1974.

CAA	OFFICER ASSIGNMENT SYSTEM STUDY (OASYS)	ONE SHEET STUDY GIST CAA-SR-84-1

THE PRINCIPAL FINDINGS of the work reported herein are as follows:

(1) It is feasible to combine the Women Officer Strength Model (WOSM) and Age by Grade and Pair (AGEBGPR) Model to determine how many female lieutenants should be accessed annually by allocating current authorizations among various initial specialties to meet a specific size force.

(2) Women officers in the force can be assigned an additional specialty to reflect the position authorizations allocated to them.

(3) Preferential distribution of interchangeable spaces within WOSM is required by specialty code within any constrained size women officer force.

(4) AGEBGPR ages the force and determines accessions based on continuation rates, distribution of authorizations by specialty, and steady-state force size.

THE MAIN ASSUMPTIONS on which the work reported herein rests are as follows:

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(2) Personnel distribution, force structure, and historical data provided by MILPERCEN are valid.

THE PRINCIPAL LIMITATIONS of this work which may affect the findings are as follows:

(1) Continuation rates for female officers by specialty code are projected from existing combined male-female continuation rates.

(2) Casualty rates are projected to be the same for each officer grade within specialty codes.

THE SCOPE OF THE STUDY included only Active Army female commissioned officers in OPMS-managed specialties.

THE STUDY OBJECTIVES were to:

(1) Review the current methodology used to determine the accession requirements as well as initial and additional specialty (INSPEC/ADSPEC) assignments for women officers.

(2) Define those constraints such as "set-asides," "management factors," and "grade-space ratio" that limit the number of women officer accessions.

(3) Modify the methodology to allow flexibility in these constraints, within a rationale that is reasonable and supportable.

(4) Evaluate the impact of the modifications on women officer accessions, INSPEC/ADSPEC assignments, and career progression.

(5) Transport the methodology developed and/or model modifications to MILPERCEN.

THE BASIC APPROACH followed in this study was to modify existing models to define the maximum number of women officer authorizations by specialty code. These data were used to determine female officer accessions, their branching (ADSPEC) requirements, and distribution of the women officer force by grade, specialty code, and years of service.

THE REASON FOR PERFORMING THE STUDY was to provide the Army a credible method to compute the number of officer authorizations that could be filled by women and show how they could be branched into additional specialties.

THE STUDY SPONSOR was the Office of the Deputy Chief of Staff for Personnel which established the objectives and monitored study activities.

THE STUDY EFFORT was directed by Mr. Wilbert Schwartzapfel, Deputy Assistant Director, Force Systems Directorate.

COMMENTS AND QUESTIONS may be sent to CAA, ATTN: Assistant Director, Force Systems Directorate (CSCA-FS).

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(1) The force structure, the personnel authorizations, and the associated direct combat probability coding of the Officer Force Management Models (OFMM) and submodels provide the basis for the steady-state personnel target mix of this study.

(2) Personnel distribution, force structure, and historical data provided by MILPERCEN are valid.

THE PRINCIPAL LIMITATIONS of this work which may affect the findings are as follows:

(1) Continuation rates for female officers by specialty code are projected from existing combined male-female continuation rates.

(2) Casualty rates are projected to be the same for each officer grade within specialty codes.

THE SCOPE OF THE STUDY included only Active Army female commissioned officers in OPMS-managed specialties.

THE STUDY OBJECTIVES were to:

(1) Review the current methodology used to determine the accession requirements as well as initial and additional specialty (INSPEC/ADSPEC) assignments for women officers.

(2) Define those constraints such as "set-asides," "management factors," and "grade-space ratio" that limit the number of women officer accessions.

(3) Modify the methodology to allow flexibility in these constraints, within a rationale that is reasonable and supportable.

(4) Evaluate the impact of the modifications on women officer accessions, INSPEC/ADSPEC assignments, and career progression.

(5) Transport the methodology developed and/or model modifications to MILPERCEN.

THE BASIC APPROACH followed in this study was to modify existing models to define the maximum number of women officer authorizations by specialty code. These data were used to determine female officer accessions, their branching (ADSPEC) requirements, and distribution of the women officer force by grade, specialty code, and years of service.

THE REASON FOR PERFORMING THE STUDY was to provide the Army a credible method to compute the number of officer authorizations that could be filled by women and show how they could be branched into additional specialties.

THE STUDY SPONSOR was the Office of the Deputy Chief of Staff for Personnel which established the objectives and monitored study activities.

THE STUDY EFFORT was directed by Mr. Wilbert Schwartzapfel, Deputy Assistant Director, Force Systems Directorate.

COMMENTS AND QUESTIONS may be sent to CAA, ATTN: Assistant Director, Force Systems Directorate (CSCA-FS).